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THE MEDICAID EPSDT DENTAL PROGRAM IN TEXAS:

EVALUATION OF THE PUBLIC HEALTH IMPACT

by

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BACKGROUND OF PROGRAM AND PROBLEM STATEMENT

The Title XIX Medicaid Programs began in 1965 as an amendment to the Social Security Act. In part it attempted to ensure the delivery of what were defined as basic health services for qualified recipients with payments for services being made directly to the providers of the services. At that time dental care was not among the services that had to be provided as part of the basic health package. Dental care was defined as an optional service which the individual states could offer under the Social and Rehabilitation Service matching funds federal-state grant system. Few states implemented a dental care program for the indigent under these provisions. In 1967 the Social Security Act was further amended to include the Early, Periodic Screening, Diagnosis and Treatment (EPSDT) program. It provided that dental services would be offered as a mandatory part of Medicaid's comprehensive health care package. Congress stipulated, however, that the 1967 amendments were not to take effect until July 1, 1969. But even by the 1969 date few states had begun to implement the program to include dental care as part of the basic health services of the Act. It was not until November 1971, almost two years after dental care became a required service, that HEW issued a set of guidelines for service care. These federal guidelines were not enforced, that is there were no penalties for noncompliance, until February 1972.

The reasons for this inexplicable series of delays are quite beyond the scope of this paper. However, it is significant that such

delayed action has been duplicated time and time again as many states attempted to implement the dental care phase of the EPSDT program. As an example of the slow gains made in the area of providing dental care for indigent patients, in 1964 the Medical Care Expenditures under Public Assistance Programs of the Federal government in the area of dental services amounted to approximately $23,000,000 or 2.25 percent of total Medical Care Expenditures for Public Assistance Programs. (This was, of course, before the inception of the mandatory EPSDT dental program.) By way of contrast, in 1973, fully one year after dental care was mandated as a required service, the total federal dollar output for dental services had risen by more than 800 percent to a level of $211,000,000. However, as a percentage of the total of federal medical care expenditures it had risen only to 2.5 percent. In viewing the dollar amounts involved in this ten year span one might say that great strides had been made to provide for dental care. Yet, if this same situation is viewed from the standpoint of inflation in the various categories of medical costs, the case could easily be argued that dental care funding is not even holding its own in proportion to other medical care expenditures.

In an unpublished survey by the Medical Services Administration of Social and Rehabilitation Service which was completed in September of 1973, of the 44 states who answered the survey and claimed to be providing dental services under Medicaid, a majority were unable to answer two very simple questions: First, how many children were being screened for dental problems, and second, how many children had been treated for dental problems. Perhaps even more significant than this is the fact that 37 states indicated no problem existed in regard to a lack of dental

resources. Without further elaboration at this point, the conclusion can simply be stated that health professionals and legislators have treated public health dentistry as a low priority service. This can be substantiated by the fact that all the proposals for National Health Insurance plans which would supercede Medicaid are either vague or extremely limited in providing for dental care.

The State of Texas EPSDT Dental Program, similar to that of many other states, did not actually begin until the mandatory requirements took effect in February 1972. After a crash program, the basic system of providing dental care was established and considered operational by July 1973. The system established is described in detail below in this report. It should be noted at this point that the Texas program covers children under 21 years of age in financially eligible families, normally labled as "AFDC" families. This simply refers to dependent children who live in families with at least one parent dead, absent, or incapacitated, and otherwise eligible for public welfare assistance. Structurally, the Director of the Title XIX Medicaid Dental Program reports to the Texas State Department of Public Welfare (through whom federal and matching state funds are channeled) and has a dual reporting responsibility to the Texas State Department of Health which, under a contractual agreement, provides the services through a disbursement system for the dental program.

Early in 1974, Dr. William C. Sellingsloh, Director of the Title XIX Dental Screening Program, initiated contact with the University of Texas Health Science Center, School of Public Health at Houston and requested that a cooperative, formal machanism to provide for an evaluation of the Title XIX program be established. Following a series of discussions

with the State Department of Health and the State Department of Public Welfare it was determined that the Title XIX Dental Program had been operational long enough to have developed sufficient data to permit an evaluation of the program. Further, since the program was still relatively new and considered as a vehicle for the testing of innovative delivery systems, and since the program was still in developmental stages, the focus of the evaluation should be the public health impact of the EPSDT dental program upon welfare clients, not simply an organizational review.

The agreement regarding resources was very simple. The University would provide a qualified student to develop the evaluation under the supervision of selected faculty and provide some financial support appropriate to the academic value of the project. The State agencies involved pledged complete cooperation in providing necessary information and a reasonable amount of personnel services required to generate additional data required by the research. It must be noted at this point that the State agencies involved have not only provided unrestricted access to data but additionally have provided adequate personnel resources to assist in the data gathering process.

Very early in this project a concise statement of the problem was given by an official in the State Department of Health. He said, in effect, the real problem of the evaluation would be to document whether the provision of a pre-authorized voucher worth $30.00 to allow for dental screening and treatment of an individual was enough to have any demonstrable health impact. In the following report the data is largely of a summary and descriptive nature. It is sufficient, however,

to provide for tentative conclusions. A further, more intensive analysis of the data is continuing; a future report will attempt to follow through on the various questions growing from the evaluation of data presented in this report.

OBJECTIVES OF EVALUATION

As a base for the evaluation effort, a comprehensive literature search on dental programs was conducted. The literature search has been extensive and covers the time period beginning in the 1920's through the present day. A very brief summary of the findings are presented at this time; a more detailed analysis of the literature and a complete annotated bibliography will accompany the final report. Published literature concerning evaluation of dental programs is practically non-existent, particularly in comparison to the length of time that dental public health programs have been conducted in this country and the volume of dollars, both federal and local, that have gone into this area of care. The onus of responsibility then is to provide a most complete range of data, measures and techniques available so that evaluation can extend the few principles that have already been established in this area. As such, one of the primary tasks of this evaluation is to establish base line data for comparison with future program evaluations within the State of Texas. (Further, publication of such data and statistics should allow for comparisons by other states' Title XIX programs.)

Basically, the literature concerning the evaluation of dental programs can be broken down into three categories. First, and most appropriate to the current report, is the professional literature published evaluating the Medicaid Dental Programs. This category of

published literature is composed in its entirety of four separate papers, three of which deal with evaluation of Medicaid Programs in specific counties in New York State and one of which deals with the state-wide program in Massachusetts. Owing to the lack of a standardized approach, this literature has little comparative value with the possible exception of comparisons with the types and proportions of dental services within each of these programs. In the section below presenting findings in this report, an attempt will be made, wherever possible, to compare the data from the Texas program to that already reported for these other Title XIX programs.

The second category of publications pertinent to this evaluation includes other published evaluations of dental clinics and dental public health programs. This category consists of some 10 to 12 various publications. These reports range from a description of state programs having large client populations to evaluations of labor union health plans having relatively small, closed populations. The techniques employed are largely summary and descriptive in nature. One focuses exclusively on fiscal management and operating costs of the State program in Alabama. The remainder employ a variety of utilization measures and cost/benefits analysis. Few even bother to report service rates or dental procedures performed on the patient population. Their utility for the present research is simply to assist in documenting some of the rationale underlying the methodology and techniques employed in this report, particularly regarding such measures as utilization and service rates.

The third category of literature deals with publications proposing strategies, practices, and methods for evaluation of dental programs. The relative merits of this grouping can be evaluated in light of the fact that none of these evaluations, schemes or proposals has yet to be adopted by any reseacher in the field of dental evaluation. In most instances these writings propose frameworks for evaluation rather than techniques or a methodology. Even in instances where a specific author has published in both his and the second category (where the data of an actual evaluation has been presented) there is little correspondence between his proposal of methodology and his utilization of that methodology in an actual evaluation. The primary benefit derived from this body of literature is in the conceptual approaches to the evaluation of dental programs, and where specific insights have been incorporated into the present statement of objectives or methodology of evaluation the source is cited in the final report.

In addition to the above categories of literature, there exists a rather large body of literature pertinent to specific aspects of this research. Examples of these specialized topics include such things as the problem of "no show" appointments in dental practice, the development of standards of dental services, the monitoring of and fiscal accountability within Federal Medicaid programs, numerous studies on utilization of dental facilities, and the epidemiology of various forms of dental disease. The primary value of these publications is for comparative purposes, leading to the conclusions found in the section labeled "Findings" where the data from the current evaluation are presented. Again, when appropriate, specific sources are cited in the final report.

It is appropraite at this time to clearly state the specific objectives of this evaluation. In terms of potential for long range effect that first objective, namely the development of a data base, is perhaps of primary importance. Quite simply, the data base is the aggregate of all data and measures derived which are gathered, organized and analyzed. As such it includes background data (such as the demographic description of the eligible population within the state), epidemiological evidence which may provide some indication of dental needs within this population, measures of utilization rates within the eligible population, various service rates to indicate the actual delivery of services to the client population, the distribution of service to the various demographic groups within the client population. various measures of cost analysis (by service, per patient, per invoice, etc.), and the findings of a survey of clients and provider-dentists. The value of the data base lies not in the collection of the information itself but rather to the future uses to which it may lend itself.

Subsequent evaluations of the state program will become particularly meaningful by comparison with the original data base. Changes in program direction, levels of funding, or perhaps even changes in needs for services may be reflected. The accretion of such information will then allow for more meaningful interpretation of the program's effectiveness and efficiency and will provide a rational basis for the judgements necessary in planning the future of dental public health within the State of Texas.

Fortunately, the value of the data base does not stop internally within the State of Texas; as a rich source of data on a state-wide Medicaid

Dental, Screening and Treatment Program it can be used as a basis for comparison with other state and county Medicaid programs. Ultimately, as a body of data representing many geographical locations and political jurisdictions becomes published and available to a large number of scholars, researchers, administrators and legislators, a determination can be made regarding the impact of this program on the American public. These materials will then lead themselves to the synthesis of standards of performance for broad based public health dental programs. It is only with such standards that the concept of "quality of care" can become an enforceable element within the delivery systems of dental services of our communities.

Somewhat parallel to the development of the data base, the second objectives is to determine the appropriateness of the conceptual model for evaluation of the EPSDT program which was developed by the Regional Research Institute at The University of Texas Health Science Center in San Antonio under a grant from the Health Services Research Institute (HSRI). The HSRI has attempted to establish a generalized evaluation model. In attempting to apply this evaluation model in a number of states where the HSRI has carried out studies, they have focused primarily on the medical care phase of the EPSDT programs. In view of the fact that the medical care phase represents the vast majority of funds expended under the ESPDT program, and that dental treatment was optional until very recently, the lack of data and analysis performed regarding dental care is understandable. Additionally, the HSRI's emphasis on the medical screening component may be viewed as an outgrowth of long-standing attitudes within the health care professions. Nominally, we

may concede that dental disease is both chronic and progressive with the definite possibility of being debilitating, but one rarely thinks of dental disease as being particularly life threatening or in any serious way reducing one's functional status.

Basically the HSRI evaluation model views the EPSDT system processually and as consisting of five elements. Its sub-systems are (1) case finding, (2) screening, (3) diagnosis, (4) treatment, and (5) case monitoring or follow-up by data management. Within each of these five sub-systems the HSRI model has developed a set of assumptions, factors to be tested, and indicators of performance effectiveness. As a general model a great degree of flexibility has been allowed to compensate for the widely differing delivery systems devised within the states and jurisdictions operating EPSDT programs. The systems analysis approach used in this model relies on a comprehensive data collection system. The HSRI, in developing this model, carried out an evaluation and impact study in eight states, some of which had long standing programs of high sophistication. Even in these areas, however, the data collection system was not equal to the task of meeting the complicated statistical needs of the model developed. This effect has been compounded by the fact that there is, as yet, between these state programs, little common definition of even the most basic terms necessary to the evaluation mode. This, however, does not negate the value of the evaluation model developed by the HSRI. In fact, it has brought a realization that the emphasis for future demonstrations should be on evaluating the sub-system of <u>case finding</u> and <u>case monitoring</u> or <u>case completion</u>. It has been correctly pointed out that these are the "pay-off" performance factors for EPSDT.

Case finding seeks to maximize the number of eligible children brought in for EPSDT screening. Case monitoring seeks to optimize the outcome potential of the existing health care delivery system by establishing a mechanism to assure that the maximum number of children diagnosed as "unwell" complete treatment. This phase of the evaluation will constitute a separate report.

Before continuing the discussion of the evaluation reported here, a brief, if over-simplified, description of the Texas EPSDT dental program is in order. The EPSDT dental screening program is operated separately from the EPSDT medical screening program. Once a family has established its eligibility as AFDC clients, notification of the dental program is made through a variety of means. The Social Services worker is particularly instructed to see that each eligible client is fully aware of the existence of the program and the potential benefits of treatment. Written notification is also particularly effective when the notice is included in the same envelope with the monthly allotment check received in the mail by the welfare recipient. Normally, the client who decides to take advantage of the dental services offered will contact his or her Social Services worker and at this time the program is further explained. The list of available and participating dentists is given to the individual and the client may select the dentist of his choice. Once this choice has been established, the Social Services Worker will call the dentist's office and make an appointment consistent and convenient to the personal schedule of the client and children involved. The Social Services worker then notifies the recipient of the date and time of the appointment and usually assures that the individual can

make the necessary travel arrangements and is familiar with directions to the dentist's office. In most cases, the Social Services workers endeavor to make another contact with the recipient just prior to the date of appointment as a reminder to the client.

Upon arrival at the participating dentist's office, the patients present the Medicaid card which indicates their eligibility. If there is a question regarding eligibility, dentists have been instructed to contact the Social Serivces office for verification. Each dental provider has a supply of pre-numbered dental vouchers allowing treatment to a maximum of $30.00 cost during the first visit. The effect of this was anticipated to allow the provider the opportunity to perform the screening and diagnosis simultaneously and immediately on the first visit. In the case where minimal treatment might be indicated, this could also be carried out during the first visit (but not to exceed the maximum allowable total expenditure of $30.00). When more extensive dental care is required, the provider initiates a "treatment plan" which specifically outlines the client's dental needs and the particular costs for each service recommended. The treatment plan is forwarded to Austin where the staff of the Title XIX Dental Screening Program reviews the dentist's evaluation. In this central office the diagnosis is checked against the proposed treatment, the costs for the treatment are reviewed, and an authorization is issued by sending the treatment plan back to the provider indicating which services are authorized and which services cannot be authorized for reimbursement.

Subsequent appointments to carry out the proposed and authorized treatment plan are established through liason with the dentist and cooperating Social Service Worker. From the above, one can reasonably state that the dental evaluation model should consist of three elements in the case of the State of Texas. That is, (1) the case finding or outreach element, (2) the screening, diagnosis and treatment elements combined into one, and (3) case monitoring or follow-up through to completion of required and authorized care.

In the findings section of this paper, some data and statistical measures are related to one of the three elements in the HSRI evaluation model. As noted, for each of these elements indicators or performance have been developed. In some instances it has been found that these performance indicators are appropriate to the types of data available for this particular evaluation. Whenever possible, new performance indicators have been developed which are appropriate to the data available for this study.

One of the more difficult objectives of this study is to compare the level of care provided to clients of the EPSDT dental program with the needs for services of this population. The only direct way to assess the level of care provided versus the needs for service would be to conduct a complete dental examination of a representative sample from the client population both prior to and immediately following the client's receiving dental care. Only in this manner could one properly determine the true level of care required and then evaluate the services rendered both in terms of adequacy to the needs of the individual and the technical quality of care provided each client. Such

a procedure would be both time-consuming of professional personnel and of high cost. Several public health dental programs do a direct examination sampling of patients and of work received following treatment and, generally speaking, the results of these examinations show the level of work to be quite satisfactory. However, in a program of this scope and nature, this would seem to be extremely wasteful of the limited funds and personnel resources available.

In light of the above, a number of indirect measures are used. The literature of public health dentistry is replete with descriptions of the epidemiology of dental disease for various ethnic groups and socio-economic classes. As a broad gauge of the needs for services, this can be compared to the specific services which are paid for by the EPSDT program to indicate the level of care received. The quality of these measures, however, leaves something to be desired in terms of scientific precision and, therefore, this type of comparison is utilized sparingly in this report.

In the client interview, several questions are directed at the patient's perception of the adaquacy of care. The results of these interviews are presented below. Additionally, the provider questionnaire, sent to a selected sample of dentists participating in the program, has a number of questions directed specifically to the needs of service within their client population and to the level of care which they feel they are both able to and do provide under the EPSDT dental program. These responses are analyzed separately and compared with the client questionnaire responses.

In addition to the above, perhaps a more valid comparison of

care versus needs can be made in the final report of this evaluation. This will be accomplished by a review of the "treatment plans" forwarded to the state office in Austin for the client population which has been sampled during this survey. The treatment plan should represent a rather complete diagnosis of the dental needs of the individual. The service and procedures recommended in this treatment plan will be statistically compared to those services and procedures billed by the dentist as having been completed for each patient. This comparison between services recommended and services actually performed will, perhaps, provide the best available evidence in terms of the levels of care versus the need for services.

The final objective of this report is to assess the public health impact of the EPSDT Dental Program. At best "health " is a nebulus concept, and it is particularly problematic regarding the public health impact of a dental program when no conceptual framework exists relating oral health to overall health. For the purposes of this report the term "public health impact" will be defined as the sum total and accumulation of all information pertaining to either the improvement of the dental status of the target population or other indirect measures which may signify an improvement in the patient's overall health. On this latter point it can reasonably be argued that the dental status or dental health of any individual is an integral part of his overall health status.

This viewpoint, emphasizing the positive effect of the term "public health impact," is supported by a number of well-established findings. First, dental disease is both chronic and progressively

debilitaing. Without the intervention of both professional care and self care or home care, satisfactory oral health cannot be achieved. Secondly, it is within the target population of the Medicaid EPSDT dental program that we find the lowest utilization rate for dental services and dentists visits. We also find, epidemiologically, that this group has the highest incident of all forms of dental disease. Further, this study is particularly adapted to the positive impact viewpoint in that the information contained herein is drawn from three distinct data files gathered from independent sources each of which has an entirely different perspective to offer. These findings then provide this study with a form of "triangulation" of results.

From the general State file of dental invoices a number of statistics are of value in assessing the public health impact. The number of individuals served provides us with a measure of the case finding rate; some conclusions also are drawn regarding the case completion rate for patients receiving such services. Both the range and depth of services provided is available from this file as well as the cost for such services. All of these measures are compared with those reported for other similar public health dental programs. This comparison is also valuable in relating Texas' Title XIX dental programs relative standing with other programs.

The patient survey contains a number of indices relevant to public health impact. Several questions called for the patients to indicate whether their perceived needs were met and how they perceived the quality of services rendered. Several other questions called for the recipient to provide an attitudinal response toward dentists and

dental care in general. Positive attitudes toward the program are considered to be particularly significant when the recipient has not had any prior dental care.

Perhaps the most conclusive information regarding the public health impact is derived from the questionnaire of dentists participating in the Medicaid program. In the questionnaire, the dentists were asked to report the percentage of case completion within their Medicaid patient load. Their opinions were asked regarding the patients' needs versus currently available services under the Medicaid programs. As further verification they were asked to rate improvement, if any, in the dental health status of their Medicaid dental patients.

It should be noted here that the information contained in both the survey of the patients and the questionnaire to the dentists provides a unique perspective for the evaluation of this program. While there have been surveys of dentists operating under public health dental programs, these have focused specifically on operational problems within the program rather than on providing general information on the overall impact of the program. The total lack of other available survey information on patients within the Medicaid or other public health programs is of more serious consequences. When one considers that a large share of the philosophy underlying the public policy which established the Medicaid program is based upon offering Federally-sponsored public health programs without disturbing the free market system of existing medical care practices within this country, one must wonder why the consumers under this free market system have not been asked to express their opinions regarding the adequacy of care provided.

METHODOLOGY OF EVALUATION

For the purposes of the Medicaid program, the State of Texas has been divided into four administrative areas. It was decided that two counties within each of the four areas could be selected as targets for extensive studies. One of the two counties selected in each area was specifically chosen to represent a high potential utilization area. The criteria for high potential utilization (HPU) were simply that the county have a large number of eligible clients within the population, a large service load of patients receiving services under Title XIX, and where there were a large number of participating dentists to provide services under Title XIX. A second county was chosen in each of the administrative catchment areas to represent a low potential utilization (LPU) area. The criteria for these counties were a small number of individuals eligible for Title XIX benefits, a proportionately small number of individuals receiving dental services, and a minimal number of participating dentists available to meet that county's needs. Comparative statistics for each of the target counties selected are presented below in the discussion of the findings.

It is anticipated that these eight selected counties representing the four catachment areas will reflect widely differentiated geographical and attitudinal conditions. In each of these four areas there was little discretion for choice of the HPU county since this distinction fell to the major urban centers around the state. There were

numerous counties considered for the LPU aspect of the study. With all other factors being equal, the LPU counties were chosen on the basis of geographical distribution. That is, they were located geographically to provide a good spread for the eight counties throughout the state. Obviously the HPU category versus LPU category will only roughly approximate an urban/rural dichotomy. Each of these LPU counties encompasses an urban area which by definition of the United States Census Bureau would make this an urban or sub-urban county. However, for the purposes of the study it was considered important to have a large enough pool of both clients and providers to ensure the ability to carry out the surveys.

This study focuses on two populations. The first is that group of individuals deemed eligible for Title XIX Medicaid benefits who have received services in the EPSDT dental program in the State of Texas. The second population under study is that group of practicing dentists within the State of Texas who have registered with the Title XIX dental program to provide services for Title XIX patients. In addition to these two specified populations, the complete dental invoice history file representing all transactions for services under the EPSDT dental program from the beginning of the program in February 1973 through June 15, 1974, was made available for study by the Texas State Department of Health. This file will enable an overview of the entire State program and allow for meaningful comparison with the information gathered on our target population.

the low frequency of occurance of these error codes, Other unauthorized codes, however, were found with a significant frequency. It was determined that some dentists were using the American Dental Association's Code on Dental Procedures and Nomenclature in the absence of a clear version of the State's allowable codes. Fortunately, the ADA coding scheme is the basis for that used by the State of Texas and it was possible to machine edit these codes to the point that there is less than 1% error possible in any of the service code categories used in this report.

In January of 1974 the Medicaid Dental Program instituted a relatively severe auditing procedure to insure the accuracy of all invoices being placed in the history files. In addition, there was a revised standardized listing of allowable service codes established at this time. These two factors assure a minimum of error being found in the records dated after January 1, 1974.

The dental invoice history file was broken down into two sections, that for the period prior to January 1, 1974 where there may be significant error and variation in the data, and that portion of the file which relates to the time period following January 1, 1974 where the error contained in the data should have been minimized. For comparative purposes, summarizing and descriptive statistics were generated separately for each portion of this file. A comparison of these statistics indicated no consistent bias in any of the relevant data fields. There were, however, some significant differences in measures between these two portions of the file. The measures understandably represented changing trends and patterns of services within the program itself. These are noted in

Dental Invoice History File

The dental invoice history file can certainly be described as massive. Represented in this file are 117,460 invoices for dental services. Of this number only 144 records had to be discarded as unusable due to errors in coding or entry of the record. This file represents dental services provided to 84,423 recipients (patients) under the Medicaid dental program in Texas. The lay-out sheet for each record, which shows the data contained, is included below in the appendix labeled "Source Documents."

The accuracy of the data contained in the dental invoice history file is of primary importance to this evaluation. A number of factors need discussion before proceeding. First, in the beginning of any program there seems to be a necessary "warm-up" period. During the initial stages of this program, like any other, there can be assumed to be a number of errors stemming from mis-coding of forms due to unfamiliarity with the new form and with the procedures and processes involved in the new system. Secondly, new programs are constantly in a state of flux, and this program was no different. From the standpoint of the accuracy of the file, the major problem faced here is in the number of allowable service codes which a practicing dentist could use in filing claims for his services. These codes, during the first year of operation (1973), apparently underwent change a number of times. As an example of this problem, it has been established that there were approximately 108 allowable, valid procedure codes which a dentist could have used. In reading this file, however, it was discovered that there were 324 different codes used. Some of these were obviously coding errors on the dentist's part or clerical errors on the part of the program staff. These are rather obvious by

detail below. Other types of common clerical errors in some of the records did occur and, whenever possible, a machine editing program was used to correct the data in these fields. For those fields in which corrections could not be made the entire record has been discarded. After these editing procedures were carried out there were, as previously mentioned, 144 records which had to be totally discarded leaving a total dental invoice history file of 117,316 records.

The purposes of this report have been stated above. Since the operations performed with the dental invoice history files are exploratory and constitute a first look at the available data from the Title XIX Dental Program itself, all statistical measures, rates, proportions, and other summarized data are of quite common usage and do not call for any explanatory preface.

Dentist Provider Survey

The methodology used in administering the Provider Questionnaire was as straight-forward and uncomplicated as possible to achieve the goals of this evaluation. A computer listing of all dentists registered to participate in the Medicaid program, dated July 4, 1974, was used as the basis for the selected samples of providers to receive questionnaires. This listing of all providers was broken down by county of practice and included some 1,574 dentists throughout the State. The eight selected target counties had 599 registered dentists participating in the program. This is approximately 38% of the total number of dentists in the Medicaid program. Within this particular listing the order of occurrence of dentists' names were by the date of registration within the program. In other words,

those who began participation in the program at an earlier date were listed before those who began within the program at a later date. In the HPU counties it was deemed necessary to sample among the providers since there was a total of 566 dentists registered in the HPU areas and it was advisable to capture the largest response possible. Every second dentist on the listing (i.e., those from HPU counties) was selected to receive a questionnaire in the mail. In the LPU areas there was a total of 33 participating dentists each of whom was mailed a questionnaire. This brought the total of the sample to 315 dentists, 282 representing high potential utilization areas and 33 representing low potential utilization areas.

Initially a 50% return of the mail samples from the LPU areas was hoped for and a somewhat lower return rate from the HPU areas. In fact, the return rate was significantly higher: 73% of the sample from LPU areas returned their questionnaires while 58% in the HPU areas made returns. The overall return rate was 60%. There were, however, a number of returned questionnaires which were considered unusable in the research.

It was anticipated that a number of these questionnaires would be deemed simply as "junk mail," perhaps never opened by the recipient. Further it was assumed that, since the instructions accompanying the questionnaire requested the dentist to personally complete the questions, the response rate on returns and in the answering of some specific questions would be significantly reduced. These feelings were justified. It was decided that any questionnaire which did not have at least half of the requested information would be discarded as unusable, indicating a lack of interest on the part of the dentist responding to the questionnaire.

Even after culling out such unusable questionnaires, 141 were coded and included in the data files. This is a total of 45% useable returns from the mail sample of 315.

The questionnaire used in the provider survey was developed exclusively for this study. This instrument, along with the instructions for its use, is found in the appendix of source documents. Several faculty members of the University, one a public health dentist, another an individual skilled in survey techniques, and this researcher all assisted in the design of this instrument. A draft of the questionnaire was reviewed in meetings with representatives of both the State Department of Health and the State Department of Public Welfare to insure that the questions provided the types of data necessary for the study and would elicit information consistent with the categories of data sought. While this in no way constitutes a pretest of the instrument, it did provide a rather carefully thought out and prepared questionnaire.

There were basically five categories of data which the provider questionnaire was designed to elicit. General information, such as age, race, sex, practice type, county of practice and length of time in the program, provide basic information about the dentists participating in the program who responded to this questionnaire. The next category of data is constituted by questions designed to elicit the attitudes of the providers towards the Title XIX Dental Program. Thirdly, there was interest in the providers' attitudes toward the patients they was within the Medicaid dental program. Perhaps the most important single category of data is that of the dentists' professional opinions of the impact of the program on recipients receiving services from them. Finally, one of

the major problems of the Medicaid program is the rate of "no shows" on appointments made with Medicaid recipients; this is dealt with as a separate set of data in the Program overview portion of the findings section. Since the questionnaire itself is appended to this report, a detailed explanation of its construction is not offered here. It should be noted, however, that the questions themselves have been designed to provide a full range of information. Some questions are completely open-ended, allowing for total freedom of response; others are semi-structured in that a number of multiple choices are presented, but in most instances there are provisions for non-catagorized responses.

The first mailing of these instruments was accomplished on September 27, 1974, with a follow-up mailing three weeks later. The second mailing went to the total mail sample since no identifying information was asked of the providers who responded. As the returned questionnaires were received, each was reviewed for completeness and a determination of their utility to the study was made. Those questionnaires that showed the care and concern required of the dentist to respond fully, in that the majority of questions had been answered, were coded and included in the data file for analysis. Missing data was coded as such. Those questions calling for an open-ended response were coded by categories of responses from the returns received. This was possible after reviewing approximately half of the returns received and developing a feel for the kinds of attitudes and opinions held by individuals responding to the questionnaires. The categories and responses are presented below. They represent a diversified response, and in almost all instances there was a consistency of response throughout a specific questionnaire. That is, dentist's responses

to a manageable level and yet provide a reasonable data base, a sample of 30 clients was carefully selected at random from each of the eight target counties for a total survey population of 240. For obvious reasons it was deemed necessary to conduct this phase of the study by personal interview. The State Department of Public Welfare was contacted and agreed to provide all reasonable assistance in the data collection stage. A listing of the number of recipients by county was provided by the Department of Welfare. This listing reflected a total of 388,961 eligible individuals under the Title XIX Medicaid Dental Program. In the selected counties, the four HPU areas had a total of 166,349 or 42.8% of the eligible State population. The four LPU counties had a total of 7,709 eligible individuals or approximately 2% of the State total.

In view of the practical limitations on the population size to be interviewed, great care was exercised in the selection of this sample. Using the complete dental invoice history tapes, a listing of all recipients for the year 1974 was produced. This file was ordered by the date the invoice was received by the Medicaid Dental Program. In view of the volume of service provided in the HPU areas, every fifth recipient was placed on this listing. In the LPU areas every recipient during 1974 was included in this listing. This print-out of recipients for 1974 was used as the population pool from which the sample was drawn. A standard random number table was used to select the sample by reference to the individual's positional listing on a page of the print-out. For each county an over-sampling technique was used and two companion lists were developed. The first or primary listing contained 30 individuals specified to be interviewed. A secondary listing of 30 individuals was provided,

to be used in the event of the unavailability or refusal to participate on a fully voluntary basis of primary selectees.

Each interview form was a "self-contained" packet. This packet, with versions in English and Spanish, included instructions to the interviewer on the way in which the interview should be completed, instructions to be read to the mother and/or the recipient, and an informed consent form to be signed by the parent and/or recipient. The interview instrument is a structured, semi-standardized form with the majority of questions focusing on the recipient. Several questions are directly addressed to the mother concerning family dental habits and attitudes about the Medicaid Dental Program. Most questions were worded in simple fashion to facilitate translation where necessary or to accommodate the range of verbal abilities encountered in the interview situation. Several questions are open-ended or provide for commentary, allowing complete freedom of response. In view of anticipated "less than ideal" conditions under which the survey may be administered the questions were viewed as being addressed equally to both the interviewer and interviewee. Thus allowing the interviewer to elicit information appropriate to the instrument in a more conversational manner. The interview packet is appended to this report in the section labeled "Source Documents".

The Social Services Division of the State Welfare Department has designated a number of social workers in each region as responsible for the Medicaid Dental Program. From this group, already familiar with the Title XIX Dental recipients, a number of interviewers in each of the eight counties was selected by the Social Services Division. It was anticipated that, in addition to personal knowledge of the client

population, these social workers would possess the required interviewing skills and whatever language capabilities were necessary for the conduct of the interview.

In September, 1974 the State Department of Public Welfare and the investigators conducted a one day seminar in Austin designed to train the social workers who would be doing the interviewing in their counties in the use of the interview instrument. The purpose and scope of the interview was presented in depth as well as a complete discussion of each question and the type of information sought by that question. This group of social workers proved to be quite helpful and made a number of suggestions leading to rewording of some specific questions. This seminar provided a pretest of the interviewing instruments. It was also determined at this time that it was necessary to have a Spanish language version of the interview in view of the large number of Spanish speaking people served by the Title XIX Program.

By mid-October the interviewing process had been completed and 30 completed interviews had been received from each of the eight target counties. These responses were coded and processed in the same manner as the provider questionnaires. In addition to gathering standard demographic information on this sample of patients, the following categories of information were sought: the recipients' attitudes toward oral hygiene and home dental practicies, their attitudes toward dental health in general, their attitudes toward the dentist providing services under the program as well as the program itself, the recipients' perception of needs versus the care received under the program, the motivation of the recipients in seeking care, and the nature of any dental care which the recipient had

prior to involvement in the Medicaid dental program. The results of the client survey are presented below.

The findings section of this report is presented in three phases. The first phase contains information of a general programmatic nature based largely on the analysis of data from the dental invoice history file of the State Health Department. The second phase focuses on the dental providers and presents information from both the dental invoice history file and the provider questionnaire. The final phase deals with an analysis of findings about recipients based on information from the dental invoice history file and the client survey.

GENERAL FINDINGS

Program Overview

From the inception of the dental EPSDT program in February 1973 until June 15, 1974, a total of 84,423 recipients received some form of dental care. During the first six and one-half months of calendar year 1974 a total of 47,136 individuals were seen by dentists, a rate of approximately 85% patients monthly. Projecting this rate on a constant yearly basis would result in 102,840 service recipients or about 34% of the total number of 299,381 eligible individuals under current estimates. It had been previously estimated that there was a total of 388,961 "eligibles." Based on the latter figure the utilization rate or penetration rate is 26%. The difference in the estimates of eligible individuals is not due to changing requirements but is ascribed by the Welfare Department to new editing procedures designed to more precisely identify individuals appropriately covered by the Medicaid program. Even allowing for some slippage it can therefore safely be asserted that the utilization rate is approximately 30% for this State annually.

This rate of utilization is significantly higher than that reported by other similar programs. In the HSRI study of 8 states, less than 15% of the Medicaid eligible persons received dental screening. Ideally, rates should be calculated by the HSRI cohort system formula. The HSRI model uses the formula

$$\frac{\text{Total \# of shows (During period)}}{\text{Total \# of Eligible (During period)}}$$

Which entails having the number currently eligible plus the number eligible for any portion of the periods in the denominator. Few states have a statistical monitoring program permitting such accuracy and no calculations of this nature are reported in the literature. It should be noted that published utilization rates would be significantly lower using this method. Further, the Medical Services Administration "Survey of Dental Services Provided Under EPSDT" completed on 9/30/73, shows only 21 of 46 states responding as providing any figures on the number of screenings conducted.

Table 1 presents utilization rates for the HPU and LPU areas under investigation for this study. The rates were calculated with the numerator as the number of individuals receiving service during the period while the denominator is an estimation of the number of individuals eligible at a specified point in time.

TABLE 1

PERCENT UTILIZATION BY HPU/LPU AREAS
FOR PERIOD 2/73 - 6/15/74

	Previous Est. of No. Eligible[a]	No. Recieving Dental Services	Percentage Utilization	Current Est. of No. Eligible[b]	Percentage Utilization
TOTAL	388,961	84,423	26	299,381	28
HPU	166,349	32,646	20	141,734	23
LPU	7,769	2,170	28	4,739	38

[a] As of July, 1974
[b] As of October, 1974

The utilization rates for the period are significantly different between the HPU and LPU areas and are probably due to the more personalized service provided by both the Welfare workers and dentists in the LPU areas. The cost figures in Table 2 lend support to the idea of more individualized care in the LPU areas.

TABLE 2

AVERAGE PER PATIENT COST

	Period 2/73-6/15-74	Period 1/1-6/15/74	Percentage Change
TOTAL	$55.25	$49.81	-10
HPU	54.28	47.81	-12
LPU	66.04	60.91	- 8

There are two factors involved in the higher cost per patient in the LPU areas. First, the rural areas tend to have fewer public facilities for health care. Secondly, fees charged by dentists in the LPU areas are slightly higher than their counterparts in the HPU areas. Whether this reflects a higher incidence of oral disease in the LPU areas is not clear from available data.

From the data available it was impossible to determine the number of visits for treatment made by any given patient since an invoice represents a billing period and is submitted at the convenience of the dentist. This billing period is normally on a monthly basis and may represent one or more visits for each patient. Since it can safely be

asserted that each invoice represents at least one visit per patient, the estimated average of 1.4 visits to a dentist compares quite favorably with the National Health Survey of 1969. The NHS data show an average of 1.4 visits and less per person, per year, by families in income groups of less than $10,000 annual income. Regionally, the South had an overall average of 1.1 visits. This indicates that Medicaid patients may be approaching a middle class dental utilization rate based solely on a visit per year.

TABLE 3

AVERAGE NUMBER OF AND COSTS FOR INVOICES PER PATIENT FOR THE PERIOD 2/73-6/15/74

	Avg. No. Invoices per Patient 2/73-6/15/74	Avg. Cost per Invoice 2/73-6/15/74	Avg. Cost per Invoice, 1/1/74-6/15/74	% Change in Avg. Invoice Costs.
TOTAL	1.39	$39.71	$39.42	- .7
HPU	1.37	39.54	38.47	- 3.0
LPU	1.52	43.24	57.10	+32.0

Table 3 shows the average number of invoices generated by patients and the average cost of each invoice. It appears evident that while cost per patient figures were decreasing as the program geared up to meet the patient load, more people were receiving fewer services in the HPU areas while more people received more dental care in the LPU areas. Published reports from other states of patient costs are not comparable with Texas data. However, by gross comparison the per patient costs appear to be lower in the State of Texas than in other States.

The explanation of the low cost per patient lies in the fact that the published reports of other Medicaid Dental Programs show an average of approximately 7 dental procedures per patient. In Texas the average is slightly over 5 services per patient, consistent with expectations since the Medicaid program in Texas serves a basically younger population (ie, under 21 as opposed to other states where older populations are served by the Title XIX Program).

Program and Service Rates

The primary utilization rate has been previously discussed and established at approximately 30%. The proportion of new patients who received needed treatment at the initital examination, or the primary completion rate, cannot be established from the data. Of the 84,423 patients, 57,434 had one invoice only (68%). This figure establishes the secondary utilization rate or the percentage of old patients returning for recall, maintenance, and continuity of care at 32% minimally. The secondary completion rate, those receiving required care at subsequent examinations, cannot be determined. Estimates of the completion rate are presented below in the provider section of this report based upon questionnaire results.

The service rates presented in Figure 1 are computed by dividing the number of specific services by the total number of patients. They are presented as percentages but are not to be interpreted as the percent of persons receiving such services. More detailed service rates are presented below in the patient section of this report.

FIGURE I

SELECTED SERVICE RATES

Preventive Care	
Diagnostic X-rays	101 %
Prophylaxis rate	68 %
Topical Flouride rate	52 %
Home Care Instruction rate	3 %
Tooth Mortality rate	31 %
Tooth Preservation rate	137 %
Tooth Replacement rate	3 %
Periodontal Therapy rate	2 %
Orthodontal Therapy rate	0.3%

Of several evaluation ratios proposed by Friedman[1] only two are reported here. The first, calculated as X-rays/prophylaxis, indicates a ratio of diagnostic services to preventive services. The assumption is the lower the ratio of preventive services to diagnostic services the lower the quality of care. This program recorded 61,959 X-rays and 57,788 prophylaxes for a ratio of 1.07:1. The ratio of teeth filled/teeth extracted is a good indicator of the restorative vs. extraction type of dentistry where quality of care is evidenced by a higher proportion of restorations. With 115,691 teeth filled and 23,295 extracted the ratio is 4.97:1.

Table 4 shows service distributions for the Texas program in comparison to published studies of other programs. The percentages are computed for specific categories or types of services in relation to the total services or dental procedures performed. On the basis of the published literature, in terms of both the program represented and the completeness of data, the comparability to the Texas program, from the

TABLE 4

SELECTED SERVICES AS A PERCENT OF TOTAL TEXAS SERVICES WITH COMPARATIVE FIGURES FOR OTHER PROGRAMS

Type of Service	Texas Title XIX	Chemung County Title XIX	Erie County Title XIX	Massachusetts Title XIX	Boston Health Clinic	Alabama State Clinics
Examinations	18%	11%	11%	15%	6%	4%
Preventive-includes X-ray, prophylaxis, flouride	45%	32%	29%	32%	41%	3%
Extractions-routine and surgical	6%	12%	17%	5%	11%	9%
Restorations-amalygam and synthetics	27%	37%	35%	35%	36%	21%
Tooth Replacement	1%	3%	59%	**	**	**
Periodontal Therapy	*	2%	1%	**	**	*
Orthodontal Therapy	*	*	**	**	**	**
Miscellaneous-All Other	2%	2%	2%	7%	5%	**

NOTE: * denotes less than 1%

** indicates incomplete data reported in the literature

lowest, is: Chemung County[2], Erie County[3], Massachusetts[4], Boston Clinic[5], and the study of Alabama's State Clinics[6].

Table 4 indicates the Texas Title XIX Dental program has a significantly higher percentage of examinations and preventive procedures than the other programs. These figures seem to indicate a high level of quality of care in comparison to the other programs listed. The low extraction rate is partially attributable to the slightly younger age groups in the Texas program; however, in comparison to the Chemung County and the Erie County studies a significant difference would still appear if age was not a factor.

Texas is among the lowest regarding the restoration rate and would probably still be significantly lower than other programs if age was not a factor. Texas is also lower in the percentage of tooth replacement by comparison to the New York counties although it is felt that with comparable age groups there would not be a significant difference. Perhaps as significant as any of the above statistics is the fact that none of these programs has any realistic provisions for either periodontics or orthodontics. In the provider section of this report this appears as a major criticism of dentists participating in the Texas program.

From the above it is concluded that the Texas Medicaid dental program does not provide truly comprehensive services. Otherwise, the dentistry performed seems to be in keeping with the best standards of professional performance. Further, the heavy emphasis on preventive procedures for this youthful population is exemplary.

Table 5 provides a listing of selected dental procedures with costs computed for the mean, median and 75th percentile to the nearest

TABLE 5

SELECTED PROCEDURE COSTS

Service Code	Procedure	Mean	Median	75th percentile
00110	Initial Examination	7.00	6.00	9.00
00130	Emergency Examination	6.00	5.00	7.00
00210	Intra-oral X-ray (complete service)	15.00	15.00	20.00
00220	Intra-oral-single, each film	5.00	5.00	5.00
00330	Panoranice, single film	19.00	20.00	22.00
01110	Prophglaxis, mixed and permanent	11.00	10.00	12.00
01120	Prophglaxis, primary dentition	10.00	10.00	12.00
01220	Topical stannous flouride	8.00	8.00	10.00
01230	Topical acid flouride phosphate	8.00	7.00	10.00
01330	Oral hygiene instruction	8.00	8.00	10.00
01510	Fixed space maintainer, unilateral band type	38.00	35.00	50.00
01610	Nuva Sealants	20.00	16.00	24.00
02110	Amalgam restoration-one surface, deciduous	12.00	10.00	12.00
02120	Amalgam restoration-two surface, deciduous	19.00	15.00	20.00
02130	Amalgam restoration-three surface, deciduous	22.00	20.00	24.00
02140	Amalgam restoration-one surface, permanent	15.00	10.00	18.00
02150	Amalgam restoration-two surface, permanent	20.00	15.00	20.00
02160	Amalgam restoration-three surface, permanent	25.00	21.00	25.00
02310	Acrylic or plastic restoration	16.00	12.00	16.00
02330	Composite resin-one surface	19.00	14.00	24.00
02331	Composite resin-two surface	23.00	18.00	28.00
02332	Composite resin-three surface	30.00	25.00	33.00
02830	Stainless Steel crown-single restoration	36.00	27.00	40.00
03110	Pulp Caps (excluding final restoration)	11.00	10.00	15.00
03220	Vital Pulpotomy	18.00	15.00	20.00
04910	Preventive periodontal prophylaxis	16.00	15.00	18.00
07110	Simple extraction, each tooth	12.00	10.00	12.00
09210	Local anesthesia	5.00	4.00	6.00
0999	Miscellaneous	13.00	8.00	15.00

dollar. These 29 service procedures were chosen to be representative of the costs of the program, not the frequency of procedures, the procedures. The procedures represented accounted for 82% of the total of 423,316 procedures. The range of costs for these procedures was of interest in that most had a minimum charge of 9 and the maximum varied from 2 to more than 10 times the mean in some instances. In view of such variability in charges for many of these procedures the establishment of a standardized fee schedule would seem desirable This fee schedule should allow for some discretion on the part of the provider. As noted, the program currently benefits from the generosity and professional courtesy of many providers. This is documented by questionnaire data found in the provider section of this report. A rigid fixed-fee schedule may tend to discourage many dentists from participating in the program. It is also likely to undermine the quality of care if dentists accede to the idea that the program gets only what it pays for on any given patient.

"No-Show" Appointments

One of the most vexing problems, frequently the topic of criticism, is appointment breaking by Medicaid patients. It has been the subject of many professional publications and invariably is discussed (sometimes quite emotionally) whenever a group of dentists providing services to Medicaid patients is assembled. The fact is that appointment breaking is a general problem of all service occupations whether one is a barber, lawyer, doctor or minister, all must deal with it.

The literature on this subject is varied. For the best review of appointment-breaking in a medical setting and original data the reader

is referred to the article by Jonas[7]. His findings are basically consistent with other studies, namely, that young members of minority groups and the poor are most frequent appointment breakers. Generally the medical literature shows no-show rates of 15% to 30% in hospital outpatient departments. Since the EPSDT program focuses on those groups most likely to "no-show," the rate could be anticipated to be even higher.

It is generally accepted that the no-show rate for the EPSDT screening exams is around 50% nationally. The HSRI did a small (unpublished) pilot study in Mississippi that seems to support this figure. There are more sources that show a significantly lower rate is the actual experience. A Boston clinic dealing largely with Medicare and Medicaid patients had a 19.5% rate[8]. Another survey of the Boston area showed "...most dentists feel Medicaid patients generally keep appointments and are appreciative of good care."[9]

As an example of the inflammatory potential of this topic DiStasio states, "General practitioners reported Medicaid patients 'broke' over 96% of their appointments, while orthodontists noted these patients 'broke' over 60%."[10] Upon looking at his data from dentists records however, one sees that only 8% of the Medicaid appointments with general practitioners were broken as compared to 4% for their private practice patients.

Putting polemics aside, it would appear that no-shows are indeed a problem for dentists providing services to Medicaid patients. The problem, however, may not be as severe as some would lead one to believe. The provider questionnaire asked respondents to estimate what percent of Title XIX appointments became "no-shows." The mean response

was 28.6% with both the mode and median at 20%. While this would indicate the problem is of serious proportions, in Texas it is not of the magnitude previously thought.

When asked what their office policy was regarding broken appointments, the providers indicated either "no policy" or no limit on broken appointments in 21% of the questionnaires. Thirty-three percent said they would not book a patient after two unexcused broken appointments. This was the modal response.

An analysis of these responses was attempted using the stated age of the provider crosstabulated against the estimated percentage of "no-shows". The higher estimates corresponded to dentists under 40 years of age. Interestingly, another crosstabulation of age against the primary motive for participation in the program showed these age groups under 40 participated more on the basis of reasons classified as "self-interest." Apparently, the problem of appointment breaking is more troublesome to providers attempting to build a clinical practice around this program. More imformation and additional discussion of this problem is found below in the section labeled "Provider Findings," "Patient Findings" and "Summary and Conclusions."

PROVIDER FINDINGS

This section presents the findings related to the operations of dentist/providers under the Title XIX program. The data has been gathered (1) by use of the Dental Invoice History file which represents all transactions for services within the program, and (2) a questionnaire to a sample of providers in eight selected counties. Findings from the analysis of the state file are presented first.

At this time this evaluation began, the Medicaid program had some 1574 dentists throughout the state registered as providers. Registration simply involved the filing of several forms signifying intent to participate. Of the total, only 1262 dentists had actually provided services to Medicaid receipents as evidenced by filing a claim for reimbursement. This means that only 80% of those intending to provide serivces actually did, and these 1262 providers represent approximately one-quarter of all licensed dentists in the State of Texas. It should also be noted that well over 90% of all registered dentists classified themselves as "general practitioners" indicating that dental specialities are somewhat under-represented among registered providers.

Those dentists who participated in the program were, on the average, quite actively engaged. Their average monthly income was computed by dividing the number of months during which the dentist billed for services by the total amount of dollars paid to him in fees. The result of $345.93 had sizeable variation and ranged from under $50.00 to well over $10,000.00 in some months

for a few providers. These figures reflected the fact that some dentists saw few Medicaid patients while others had built large clinical practices around this program.

One of the primary impact measures of this program must be the quality of services provided to recipients. A deeper treatment of this subject is found in the section which follows. However, preliminary statistics were generated using the provider data. Service rates were computed on a per dentist basis utilizing the seven service code categories previously specified. Since these statistics reflect provider rates, they are somewhat lower than the recipient rates. The reason is that a small but significant fraction of the patient population saw two or more dentists and therefore were counted more than once in the averaging procedure. It was found that an average of 1.9 preventive services was performed per patient by each dentist. Preliminary indications are that younger dentists provided more preventive service than their older counterparts and that the preventive service rate was slightly higher in the LPU areas than the HPU areas. These latter findings are tentative at this time but will be pursued in a future report.

The surgical care rate (extractions) per patient was 0.3, indicating that fewer than 1 in 3 patients required a tooth extraction. A very slight difference was noted in that the younger dentists had a lower extraction rate while almost no difference was discernable between the HPU/LPU areas.

The overall tooth preservation rate was 1.3 per patient and the younger dentists had a slightly higher rate than older providers. There

was too much variation in the figures to allow for any interpretation of differences between the HPU/LPU areas.

The tooth replacement rate (.04), the periodontic service rate (.02), and the orthodontic service rate (.003), were all so small as to be insignificant for further analysis. This is, of course, an artifact of the program and not indicative of the practice of dentistry in the state. The questionnaire results presented below show a remarkable consistency in criticism of the program's limitations in this regard. Lastly, the "other miscellaneous service" category rate was 0.9 per patient.

The various costs charged for specific services are definitively set out in Table 5 of the Program Overview Section. As a comparison of charges between dentists, the average fee for each of the seven service code categories was computed. These findings are as anticipated. Younger dentists appear to charge slightly more for services than older dentists. At this time it is not possible to separate out the effects of age from the variations found between the HPU/LPU areas. This will be analyzed in a future report. The service code categories with the average charge for such services are:

FIGURE 2

AVERAGE CHARGES FOR SELECTED SERVICES

1.	Preventive Service	$ 7.76
2.	Surgical Care	10.64
3.	Tooth Preservation	14.73
4.	Tooth Replacement	9.79
5.	Periodontic Service	4.20*
6.	Orthodontic Service	3.45**
7.	Other Miscellaneous	7.07

* Reflects limited primary care only, eg. periodontal prophylaxsis

** Reflects diagnostic service only

Before proceeding to the results of the questionnaire, several points bear further discussion. Differences in service rates between older and younger dentists were slight, but noticeable. Statistical tests of significance were not applied; however, further refinement of the data and the pursuit of relevant questions raised by the preliminary findings make such effort incumbent and will be provided in a later report. Only after reorganizing this data can specific hypotheses be adequately tested. With these qualifications, intuitively, some of the differences in charges for specific types of services appear to be significant. Understandably, a young dentist beginning practice in a competitive urban setting will have higher overhead and operating costs than established practitioners. Faced with building a practice his amortization of costs often necessitates a slightly higher fee schedule. Whether this is offset by the utilization or application of more modern techniques, equipment and the availability of more time for personalized service remains to be explored.

From the above list of service code category average service costs in Figure 2, it is apparent that preventive services are cheaper on the average than surgical care (extractions) as well as being "better" dentistry. Tooth replacement, periodontic and orthodontic service categories have a very low average service cost, reflecting both the minimal amounts of services authorized and the low order of procedures performed in these categories.

PROVIDER QUESTIONNAIRE RESULTS

All data presented in this section is summarized from the responses of Title XIX dentist/providers who returned questionnaires. Instances where a significant proportion did not answer a specific question noted as "no response." There was not enough demographic data available on either the total population of practicing dentists in the state or of those registered to participate in Title XIX to draw any firm conclusions regarding the representativeness of these respondents. However, some factors do provide confidence in this area. First, the high rate of return. Second, the range of responses received indicate no small spectrum of either personal or professional opinion. Lastly, there is enough uniformity in responses and validity through comparison with more objective data to allow for triangulation of results. Simply stated, no attempt will be made to qualify these results at present. Generally the data is presented unqualifiedly and in specific instances where generalization is obviously unwarranted it is indicated as such.

A brief demographic description of the respondents gives a picture of the group represented. The average age was 39.6 years with a range from 26 to 83. Interestingly 68 providers stated age in even years with 70 giving an odd number of years. All were males with the racial breakdown as 93% White, 2% Black, fewer than 1% Mexican-American, and 4% with "no response." Type of practice was designated as "General Practictioner" by 88%, by 7% as "Pedodontists", by 3% as "Oral Surgeons", by 1% as "Orthodontists", and fewer than 1% did not specify practice type. As previously indicated, 125 served HPU or large metropolitan areas and 16 had

practices in the LPU areas. This intuitively is reasonably representative of the dentist population registered to provide service under Title XIX in Texas.

The length of time these dentists have participated in the Medicaid program was just over a year on the average with a range from 3 months to 16 months. From this one may conclude that the questionnaire taps a large reservoir of individual clinical experience within the Title XIX program. With this in mind the provider's attitudes towards the program assume an added measure of importance.

Table 6 shows the reasons given for participation in the program. There was space for three responses and the order of these responses is given as primary, secondary, and tertiary.

TABLE 6

DENTISTS' REASONS FOR PARTICIPATING IN MEDICAID

Reason Stated	Primary	Secondary	Tertiary
1. Provide Ass't to poor children	39%	18%	5%
2. Source of new patients	16%	8%	2%
3. Professional obligation	14%	3%	1%
4. Provide Community Service	13%	10%	1%
5. Supplement income	9%	10%	6%
6. Professional interest in program	5%	3%	4%
7. No response	5%	49%	82%

Although interpretation is obvious from the table, the interesting feature is that as a primary response, reasons #1, #3, and #4 taken together indicate a humanistic concern for the less fortunate and comprise 66% of the primary motivation responses for this group of dentists. Responses #2 and #5 would indicate participation due to self-interests on the part of 25% of these dentists.

When asked how the program focus should be changed, more than half the providers said more comprehensive services should be available. Operating problems experienced by the provider were given the following priority in their responses: (1) no- shows, (2) excessive paperwork, (3) show authorization for services, (4) lack of patient interest/motivation, and, (5) lack of comprehensive services available to patients. Yet when asked to "constructively criticize" the program, 35% did not respond and 7% had "no criticism" and few of the critical comments contained any constructive suggestions, all of which seems to indicate that the solo practitioner is aware of his limited knowledge in administering a public health program. On the other hand, when forced to rely on personal clinical experience in stating what they felt were the most positive aspects of the program, over 75% responded in terms of its humanitarian value in that the program provided dental services to those who otherwise could not obtain care.

This conflict of an approach/avoidance attitudinal set is somewhat clarified by other responses. Forty-six (46) percent of the Medicaid providers stated they would like to increase their Title XIX patient load as opposed to 9% wanting to decrease the patient load, and 43% desired to maintain the same number of patients. The latter group of dentists

indicated that an average of 10% of their total patient load was under Medicaid. The model response was 1% and fewer than 4% had a Medicaid-dominated practice where the majority of their patients were Title XIX recipients. Contradictory findings were reported when the dentists were asked to estimate the percent of their gross income from their practice (Title XIX renumeration). The modal response was 1% of their income with a mean response of 8.4%. Only 9% refused to answer, while the maximum was found to be 55%. This would appear to be spurious data in light of the fact that two dentists reported a practice composed entirely of Medicaid patients.

The above-noted difference between the proportions of Medicaid patients in dentist's practice and the percent of practice income from Medicaid is partially explained by the responses to another question. When asked, "In what percent of Title XIX cases do you perform services for which you know you are not going to receive compensation?," the dentists' estimates averaged out to 22% of their cases. From personal comments and other communications, it is clear that this is in most instances cases where the provider completes dental work he feels necessary even though the program staff has previously disallowed reimbursement for these procedures.

In line with this, the Medicaid EPSDT program is not designed to provide comprehensive care. Dentists surveyed were asked their opinions of the greatest unmet needs for services, i.e., those not currently authorized under Title XIX. "No response" had the greatest frequence of occurrance at 33%. Using the relative frequency of responses, the priorities were established as follows: (1) tooth replacement, 18%,

(2) oral hygiene/preventive measures, 15%, (3) endodontics, 11%, (4) orthodontics, 10%, (5) surgical care, 8%. Other miscellaneous responses accounted for another 5%. To determine the extent of this situation, dentists were asked to estimate the percent of cases where Medicaid patients did not receive needed care because of program limitations. The average estimate was 30%. This means that roughly one-third of those actually receiving care are not given comprehensive dental care from the providers' viewpoint.

As a counterbalance to these apparent deficiencies in the Title XIX program, the dentists estimated that without the Medicaid program an average of 77% of these patients would go without any dental services. Both the mode and median response was that 90% of these patients would not receive dental care without Title XIX in effect.

In summary, dentist/providers under the Title XIX program have some definite opinions and attitudes towards the program. While they regard the program as necessary and indispensable to delivering dental care to children in poverty homes, they also view the restraints and limitations of the bureaucratic structure as an unwholesome if not unwarranted intrusion into professional treatment perogatives. The encouraging aspect of this is that the weight of the respondents' opinions are on the positive side. That is, a greater frequency of response is seen in their altruistic motivations, the perceived need for the program, and its goals of achievement than one finds in the responses critical of the program's deficiencies and operating problems.

An important aspect of this study was to determine the dentist/provider's attitudes towards Medicaid patients. As we have seen, the majority of dentists participate in the program for apparently altruistic reasons even though for most the participation is a small fraction of their practice, and few of those responding to the questionnaire evidenced a desire to reduce their level of participation. If this is assumed as true, then one could anticipate a positive attitude toward the clients of the Medicaid program.

The questionnaire sought to find out who had been refused service and for what reasons. Fifty-eight (58) percent of the providers said they had refused a patient; 40% indicated no refusals. (Fewer than 2% failed to respond to the question.) The reasons for treatment refusal, with the relative frequency, are: (1) broken appointments, 48%, (2) uncooperative patients, 27%, (3) eligibility not determined, 14%, and (4) other miscellaneous reasons, 11%. To further define the attitudes of providers towards Medicaid patients they were asked (see question #7) if they selected "patients to treat" and, if so, for what reason. The majority, 61%, had utilized a selection factor and 79% of those who had not used any selection criteria did not do so because of a perceived professional obligation. The largest factor cited in selecting patients was "uncooperative" (either behavior or attitude), with a frequency of 42%. Only 15% of the dentists gave "broken appointments" as a selection criteria while 17% specified that the patient was either too young or had care requirements inconsistent with their practice specialty. "Social incompatibility" accounted for 15% and other miscellaenous reasons for the remainder.

The results of the questions regarding "refusal" and "selection" are close to being contradictory. Both responses indicated the majority had denied patients appointments. In the "refusal" question, broken appointments was the most frequent response with "uncooperative" being a distant second. In the "selection" question, "uncooperative patients" was the most frequent response with "broken appointments" being tied for fourth place with "social incompatibility." Neither, however, indicates a warm or positive attitude towards Medicaid clients. It was anticipated that the word "refused" in question four (4) of the attached provider questionnaire would bring a rather guarded response. "Selection," as found in question seven, tends to be more impersonal and allows the respondent more professional latitude. It is felt that the responses to question seven are more indicative of the dentists' true attitudes towards Medicaid patients. This is further supported by the data from questions eight and seventeen given below.

Question eight asked the providers if they had lost any private practice patients since participating in Title XIX and the perceived reason for this. Only 8% felt they had lost other patients due to their participation and the reason given by the majority was that the unreliability of appointment keeping of the Medicaid group had disturbed their scheduling procedures. As seen in the discussion of no-shows, this is a serious problem. However, it may be based more in personal antagonism (or affront to one's professional status) rather than as justifying the indignant outcries leveled at the Medicaid programs by some groups of dentists.

Perhaps another depiction of provider attitudes towards Medicaid patients is in their responses to what they felt was the motivation of

Title XIX patients to see a dentist. Table 7 presents this data from question seventeen.

TABLE 7

MOTIVATION OF TITLE XIX PATIENTS AS PERCEIVED BY PROVIDERS

Conceptual Categories	% of Responses			% of Total Responses*
	Primary*	Secondary*	Tertiary*	
1. Relief from pain	48	14	1	21
2. Take advantage of free service	30	26	4	4
3. Parental concern for child	6	3	5	5
4. Concern for appearance	1	9	6	5
5. Concern for dental health	4	7	9	7
6. Concern for overall health	-0-	3	1	1
7. Loss of teeth or use of teeth	1	3	1	2
8. Fear in refusing service	4	3	1	3
9. No motivation perceived	1	-0-	-0-	-0-
10. No response	6	33	72	37

*May not total to 100% due to rounding

Since this was an open-ended question, the comments contained substantive qualities as well as a tener of feeling underlying the statements themselves. Such statements as "Pain, why else?" or "These people want everything free!" are easily comprehended. However, many one word responses such as, "Pain" or "Free," defy interpretation on an attitudinal level. For that reason, response categories numbers 1, 2, 7, 8, 9, and 10, must be viewed as neutral attitudinally. Even though it was usually easy when

reading through a questionnaire to discern the respondents attitudes, this cannot be communicated precisely without further refining of the data. This will be attempted in a future report. Hence, the most significant part of the above table at this time is items 3-6. These responses may be said to contain some elements of warmth, mutuality of feelings, or are in some small way perhaps indicate some positive feelings toward Title XIX patients. Unfortunately, only 11% of the providers saw these as primary motivation and only 18% of the total of responses included one of these. Attitudinally, this lack of positive response is seen as significant. In the section below containing the patient interview results, a comparison of self-reported motivation will point up this gross lack of rapport between providers and patients.

One of the primary purposes of this evaluation is to assess the public health impact upon the Medicaid patients. The provider questionnaire was viewed as a potent instrument to cull a clinical opinion from a large number of practicing dentists. Other more direct measures of impact involving such procedures as examinations of patients, retrospective/prospective studies and the like were deemed not feasible. The major problem with the data reported here is not felt to be a problem with its validity; it is rather its reliability that is in question. There is no ready solution for this drawback other than to utilize the triangulation method with the program data and the patient interviews.

It has been seen from the data in the program overview that good quality dentistry is being performed, based upon such measures as the

high rate of preventive services, the low rate of extractions, the favorable ratio of restorations to extractions, the utilization rate of patients, and many other such indices. It has also been noted that although many providers have a critical view of the bureaucratic structure of the program and its treatment limitations, this is well-tempered by what they see as its goals and accomplishments. In fact, some of the treatment benefits can not be seen in reviewing any available data since many providers are performing services for which the Title XIX programs is not billed, and no record other than those of the individual practitioner will reflect these services. Further, even though it would appear that a significant proportion of the providers view Medicaid patients with some degree of disdain, a combination of altruism and self-interest and the constraints of professionalism appear to maintain a largely self-regulated service delivery system of acceptable quality.

One measure frequently used in evaluating a health care system, by way of patient impact, is the rate of treatment completion. A problematic assumption required by this method is that if a prescribed course of treatment is followed through to completion, patients undergo a transition from unwell to well or from a diseased state to a healthy state. Data available from state agency sources does not contain this information. Providers were asked to estimate the percentage of their Title XIX patients who actually complete treatment plans. The responses indicated that an average of 84% of Medicaid patients completed a treatment plan. The median response was 90% and the mode was 100%. Slightly less than 16% of the providers in the sample gave no response. Certainly these statistics must be interpreted

as qualified by the fact that the patient population is relatively young and most in need of largely minor services. This is still an impressive statement of impact. It would mean that 4 out of every 5 Medicaid dental patients are relatively disease free following treatment.

When asked what percent of Medicaid patients were referred to other dentists for services, the average of the estimates was 9%. Providers also indicated that on the average approximately 5% of these patients were referred to physicians for medically related problems. While these percentages do not appear large, they seem to demonstrate an involvement with the patients that goes beyond the self-interest motive. Additionally, a significant number of patients are being referred to the medical screening programs through the dental program. This demonstrates some degree of at least potential impact on the Title XIX patient's overall health.

Providers were also asked directly to rate the improvement in dental health seen on the part of their patients. Eighty-four (84) percent said there was improvement while only 9% said they saw no improvement in the dental health status of their Medicaid patients. The degree of improvement was assessed by three possible answers: "very temporary" was the rating of 14%, "temporary with the possibility of long term effects" accounted for 71%, and "of long duration" was the judgement of 21% of the providers. These percentages reflect that in some cases more than one choice was checked. In most instances, double checks occurred between the opinions of "long term duration" and the "possibility of long term effects." From this, one can conclude that the clinical opinions of the providers is overwhelmingly one of marked, positive improvement in the dental health of Title XIX patients.

Before summarizing the results of the provider data, questions 9 and 10 of the survey have been purposely omitted from this presentation. The data anticipated from these two questions was obviously viewed as invaluable in determining the special and/or additional dental care needs of the Title XIX recipients. Unfortunately, only a very small percentage of providers either took the care required or felt able to accurately estimate this set of figures. Many did attempt a partial response. However, the undue complexity of estimating some 68 different percentage figures discouraged too many respondents. Rather than providing data based on such few responses it is sufficient to simply state that the responses indicated that Title XIX patients had dental care needs beyond those normally seen by the providers in their private practice patients.

In summary, dentist participation in the program is widespread facilitating access to services by clients of Title XIX. Particularly in major urban centers there would seem to have occurred "over-recruiting" since some dentists indicated they received few or no Medicaid patients. While this situation offers the patient a real choice in seeking treatment, the overall effect of holding down the program as a small portion of a practitioner's clientele has both positive and negative aspects. On one hand, it may reduce the opportunity for profiteering from the program, but on the other place patients under the care of dentists ill-prepared by training or experience to cope with the social and cultural differences of this patient group.

The actual care received by the patients, given the limitations of the program, is at the least adequate. Whether the monetary restrictions continue or are lessened, the program to date is viewed as a very necessary medium in reaching a population group who otherwise could not provide for their dental care needs. The providers indicated a rather high degree of dissatisfaction with both the administrative restraints and the lack of treatment perogatives within the Medicaid program. In view of the nature and tradition of the "solo practitioner" in dentistry, this is a well-understood and-anticipated attitude.

From the responses to many questions one must conclude that in the daily operation on a case-by-case basis, the provider feels squeezed by a rigid, time consuming set of administrative procedures on the one hand and an unruly and often unappreciative clientele on the other. These attitudes are apparently offset by the holistic view of what the provider sees as the results of his efforts and the program's accomplishment. This is clear both in their responses to the positive aspects of the program and their assessment of the impact on the dental health of their patients.

PATIENT FINDINGS

The Dental Invoice History file contains all of the data gathered on Medicaid recipients who received dental services under the Title XIX screening programs during approximately the first year of operation. Due to the massiveness of this file a random sampling procedure was used to simplify data manipulation. Each record was reviewed and, whenever a recipient had more than one voucher on file, they were consolidated into a single patient record. The unit of analysis used was patients, not billing claims or vouchers. Each patient record was scanned, assigned a random number digit and then either replaced in the original file or put into a separate twenty percent sample file. The racial category of "Other" was sampled at a fifty percent (50%) probability to insure a number large enough for computational purposes. Following this procedure, from the original file representing 84,423 patients a sample was reated consisting of 16,974 consolidated patient records or approximately 20% of all patients. Table 8 below shows the representativeness of the sample population to the total patient population based upon those demographic characteristics available.

From Table 8 the only slight difference apparent is in the age categories of the sample population compared to the total population. Since the categories of "Sex", "Age", and "Region" were all free to vary during the random sampling procedure, this is not viewed as a serious defect but as an artifact of the randomness.

TABLE 8

SELECTED DEMOGRAPHIC CHARACTERISTICS OF THE EPSDT PATIENT POPULATION AND A RANDOM POPULATION

Characteristic	PERCENT OF PATIENT	
	Total Patient Population	Sample Patient Population
SEX		
Male	48.2	48.8
Female	51.8	51.2
RACE		
White	14.7	14.7
Black	48.8	48.4
Latin	36.3	36.4
Other	.25	.5*
AGE		
0-5	18.5	27.4
6-13	58.8	55.1
14 & Over	22.7	17.4
REGIONAL		
HPU	38.7	38.7
LPU	2.6	2.6

*This category was intentionally sampled at a higher rate.

TABLE 9

PERCENTAGE DISTRIBUTION OF RECIPIENTS BY NUMBER OF INVOICES

Age	% Total Recip's	% Recip's W/1 Inv.	% Recip's W/2 Inv.	% Recip's W/3 Inv.	% Recip's W/4 Inv.	% Recip's W/5 Inv. or More
0-3	5.8	8.1	1.1	0.6	0.5	-0-
4-6	20.1	23.0	14.1	13.4	15.2	23.0
7-9	20.1	19.6	21.3	22.1	19.2	23.0
10-12	19.5	18.1	23.2	19.6	13.8	9.7
13-15	16.9	15.4	20.2	19.9	21.6	12.4
16-18	11.9	10.6	14.4	17.1	20.0	22.1
19-21	5.2	4.8	5.5	7.1	9.7	9.7
Over 21	0.3	0.4	0.3	0.2	0.2	-0-

Table 9 shows a different age grouping which is used to contrast the total recipient population with the patient population according to number of invoices.

Table 9 clearly shows that a slightly older age composition is found as the number of invoices increases. This is predictable in that many dental diseases are chronic and progressive over time so that more care would be required in the older age groups. Therefore it is crucial, as Faine[11] points out, to specify what the unit of analysis is, i.e., persons or invoices.

Previously discussed data in this report give indications that Medicaid recipients of dental services are by most standards receiving adequate care. Table 10 shows specifically the rate of services for each of the service code categories. These rates were computed by dividing the total number of services received by the sample population by the total number of persons within the sample group and converted to a per 100 patient rate.

TABLE 10

SERVICE CODE CATEGORY RATES OF SERVICES PER 100 PATIENTS BY AGE GROUP

Category of Service	Rate of Services Per 100 Patients			
	0-5	6-13	14 & over	state rate
Preventive	204.8	239.3	219.6	226.4
Extractions	11.0	37.6	36.9	30.2
Tooth Preservation	91.4	145.7	172.0	135.4
Tooth Replacement	2.0	3.1	5.2	3.2
Periodontics	0.3	1.5	5.7	1.9
Orthodontics**	0.3	0.3	*	*

*These rates were not computed because of their low levels of significance.

**Screened only - not treated

These service rates demonstrate the programmatic emphasis on preventive services and vary little with regard to age of the patient. Extractions are overall and age differences indicate that unnecessary extractions are minimal. Tooth preservation rates are consistent with previous data and in relation to the extraction rate yields a ratio of 4.48:1 which is acceptable. The categories of periodontic services and orthodontic services are not considered to be significant for reasons outlined above. In the area of tooth replacement especially when compared to extractions in older age groups, the rates show an obvious deficiency in the program.

In the proceding sections of this report there were indications of more services and therefore better quality dentistry being performed in the LPN areas as compared to the HPU areas. Table 11 more clearly illustrates this fact.

TABLE 11

SERVICE CODE CATEGORY RATES OF SERVICES PER 100 PATIENTS BY REGION

Category of Service	Rate of Services per 100 Patients		
	State Rate	HPU	LPU
Preventive Services	226.4	240.4	250.9
Extractions	30.2	30.6	33.6
Tooth Preservation	135.4	112.0	180.4
Tooth Replacement	3.2	2.3	3.9

In the HPU areas preventive services are noticeably higher than the state rate while tooth preservation and replacement are lower. Extractions are approximately the same. LPU areas have what appears to be significantly higher rates of services in both preventive and tooth

preservation categories than either the state overall or HPU areas. Additionally, tooth replacement rates are significatly higher in LPU than in HPU areas, and while extractions are also slightly higher they do not seem significantly higher.

One can only hypothesize the reasons underlying these differences. Differences in the rates by sex and race were quite small. Age is a significant factor and the differences in these rates are in keeping with the normal differences required by any population receiving dental care. It may be speculated however, that since the really significant differences develop in comparison of HPU to LPU regions, the reasons relate to differences in the quality of life or lifestyle. It is suggested that two related factors may be primarily implicated. First, in the less urbanized LPU areas the difficulties in travel to receive services may be judged sufficient by the provider so as to warrant his allotment of office time to provide more services during an appointment. Secondly, in the LPU areas the possibility of more personal involvement in the client/provider relationship exists. With fewer "managerial" constraints which create an "assembly line" atmosphere, the provider may give priority to patient welfare over economic factors in his practice. These factors as a possible explanation will be tested in a future report.

In the Program Overview Section the average patient cost was established at $55.25 for the state while HPU areas averaged $54.28 and LPU areas had an average patient cost of $66.04. Table 12 shows the average patient costs broken down by age and region. Aside from the progressively higher costs incurred in higher age groups, the most significant feature is the marked increase in patient costs in the LPU areas over both the HPU areas and the state as a whole. This further

demonstrates the probability of more comprehensive care in the LPU areas.

TABLE 12

AVERAGE PATIENT COSTS BY AGE OF PATIENT BY REGION

Age	Total (State)	HPU	LPU	% Difference HPU - LPU
0-3	19.98	24.39	19.64	-19%
4-6	45.04	46.11	52.66	+14%
7-9	57.67	56.76	74.24	+31%
10-12	56.48	56.57	68.23	+21%
13-15	62.42	61.35	76.11	+24%
16-18	67.93	64.11	69.25	+ 8%
19-21	66.93	62.91	74.25	+18%
21+	68.36	61.49	74.00	+20%

An interesting point for a future study would be to establish whether clients currently receiving services have a reduced need for dental services in the future. This could help demonstrate both the wisdom of concentrating on certain age groups for maximizing cost effectiveness and the impact of preventive dentistry on children in this socio-economic strata.

It should also be noted that the cost figures reported here compare favorably with those reported by Paine[12], O'Shea and Bissell[13], Gluck[14], and Shory[15], even though their reported costs are based upon data six to eight years old.

By way of summary, before proceeding to the results of the patient interviews, the data presented in this and preceeding sections is consistent in showing what can be termed adequate dental care. Further, the quality of care is, by many criteria, superior in terms of more

services for patients residing and/or receiving treatment in the LPU counties.

PATIENT INTERVIEW RESULTS

The methodology for conducting the patient interview has been stated earlier. The criteria of the success of the interviews must be judged by both the representativeness of the surveyed population as well as by the utility of the data accumulated. Table 13 compares the surveyed group with the total patient population on selected demographic characteristics.

TABLE 13

COMPARISON OF SELECTED DEMOGRAPHIC CHARACTERISTICS BETWEEN THE PATIENT INTERVIEW POPULATION AND THE TOTAL EPSDT PATIENT POPULATION

Characteristics	Percent of Population	
	Total Patient Population	Patient Population Interviewed
SEX		
Male	48.2	48.7
Female	51.8	51.3
RACE		
White	14.7	16.3
Black	48.8	43.8
Latin	36.3	37.5
Other	.25	.25
AGE		
0-5	18.5	9.6
6-13	58.8	64.2
14 and over	22.7	26.3

The above table indicates a close correspondence in the demographic variable with the exception of age group 0-5 years. Two factors account for the variance. First, the sample was drawn from a file of

invoices, not patients, and hence may be more representative of dental visits than patients. This would explain why the survey population is slightly older. Further, the social workers conducting the survey may well have introduced a bias to interview slightly older and therefore more verbal respondents. A quick test of the validity of the age of the group surveyed showed 119 gave an even-numbered age with 121 giving an odd-numbered age figure. In view of the small size of the group surveyed and the above circumstances, the variances between the survey group and the total patient population are not considered serious to the point of requiring major qualifications of the resulting data for the purposes of this report.

In addition to the above demographic variables, other information was collected which provides a descriptive picture of recipients and their families. Religious preference was found to be divided primarily between Baptist (40%) and Catholic (38%) with the remaining choices evenly divided among three other sects. Occupationally, over 86% of the respondents gave their status as "Students" and the average grade attained was 6th grade. Only seven percent indicated graduation from high school

Family data collected indicated an average age of 38 years for the patient's mother (or legal guardian). The educational attainment of the mother averaged completion of the 9th grade. Twenty-three percent did not complete grade school and only 13% completed high school. The father was presently living in the home in approximately 15% of the families surveyed. There was an average of 4.6 children in the home and a total of just over 6 persons in the household. This indicates that in the great majority of cases one of the patients grandparents was persent in the family arrangement.

With the above descriptive data in mind many of the following responses to questions are predictable. The dental history and attitudes displayed are fairly typical for similar groups surveyed in other reports.

Patients' attitudes towards both the program and the providers were of primary interest to this evaluation. To a large extent these attitudes will determine the effectiveness of the program in that they constitute either a negative or poritive motivation in seeking services. In addition, post-decisional attitudes will be modified or reinforced by the patient's perception of the quality of care received. The accuracy of these perceptions will be determined in a later report.

How Medicaid clients learned of the dental program is the subject of question #22. Eighty-five percent indicated they received the information from the Welfare Department social worker. Another 17% said a mailed notice was their source. Very few respondents chose any of the other sources listed. These were not mutually exclusive choices and apparently the feeling was that the most intelligible and meaningful information came from communication with their caseworker.

Approximately 5% of the patients stated they were refused services in response to question #21. The majority indicated that problems in determing eligibility were the case. A response by 7% to question #19 indicated that they had difficulty in obtaining services. In this instance the majority of the problems stemmed from delay in getting an appointment arranged. Since each of these respondents did receive services, the problems were obviously resolved. Unfortunately, with the low numerical frequency of those reporting problems in obtaining services (questions 19 and 21) no analysis of the problems encountered is possible. However, this does seem to indicate a lack of coordination between the various agencies

on the local level and the provider. Based on the above frequencies it is a significant problem and was referred to by a number of providers in their responses on the questionnaire.

In response to whether a particular person motivated or encouraged the Medicaid dental visit, three categories received the bulk of responses. The caseworker was cited by 36% of the respondents as instrumental while 17% was themselves (mother or guardian) as the primary motivator. Approximately 10% indicated the school nurse was most responsible. This indicates both the active role of the caseworker as the principal component in an outreach program and good working relationships with school health personnel. Also significant is the fact that none of the clients surveyed indicated a dentist was a motivational factor. The reason for this lack of the latter response is unclear; however, it is clear that few dentists refer private practice patients to Medicaid, based upon this survey.

One of the most important questions was asked to determine what motivated the child's visit to the dentist under Medicaid. Forty-one percent indicated again a person as responsible for their action with 32%, or almost one-third, attributing their motivation to the caseworker. Fifty-seven percent stated their parental concern for the child's dental health was the primary motivation and in 43% of the total responses specific dental conditions were also cited as the cause of their concern. Again the importance of the caseworker to this program is clear. Additionally, it is gratifying to find a large proportion of these parents knowledgeable of their children's dental problems and willing to seek care when available.

Since the interest in receiving dental services has been demonstrated an important question is, what steps would have been taken

if the Medicaid dental program was not available? Two-thirds of the respondents (67%) said they would not have been able to obtain dental services without Medicaid. The remaining 33% identified the following as possible sources of care available to them: (1) a private dentist - 13%; (2) city or county clinic - 18%; and, (3) other unspecified source of care - 2%. From the above one may conclude, as did the providers in their responses, that the majority of Medicaid dental patients would not be able to otherwise obtain treatment without some form of financial assistance.

The preceding discussion, which indirectly assesses the patients' attitudes, may be summarized as demonstrating their definite interest in the availability of dental care. The importance of the caseworker as a motivational force and source of information cannot be overstated. One has the impression that the majority of these parents (or recipients) display a normal concern for the dental health of their dependents while being quite skeptical of their ability to obtain such services. This is probably why the caseworker is so important to this process - for by providing information, support, and motivation the caseworker helps the client over come the ingrained skepticism.

Patients' attitudes were also surveyed more directly as in question #24. Ninety-four percent of the clients said they felt as if they were treated in the same manner as the dentists' other patients. They apparently did not feel that being Medicaid patients influenced either the attitude of the dentist or the quality of care they received. This is a strong endorsement for the professional demeanor of the providers. The only criticism of those who felt they were treated "differently" was that of rudeness. This was the response of 4% of the surveyed population. The source of this perceived rudeness could have

been anyone in the dentist's office; however, this does generally support the conclusions stated previously in the provider section of this report.

In describing the perceived attitude of the dentist, the respondent had eight choices (not mutually exclusive). The frequency of their responses in each category was:

1. Friendly - 72%
2. Concerned - 44%
3. Courteous - 42%
4. Professional - 26%
5. Cool - 5%
6. Impersonal - 5%
7. Did not want to be bothered - 5%
8. Hostile - 5%

These findings are generally consistent with those reported immediately above and again demonstrate a very positive feeling for the providers on the part of the vast majority of patients. Their characterization of the dentist as "friendly" may be due in part to its position as first choice although all categories of positive response far exceed those of a negative nature. Negative responses are both minimal and consistent. Further, when asked to rate their level of satisfaction with the dental services received, 47% said they were "very good," 36% noted services as "good," and 10% gave a "fair" rating. Only 7% indicated dissatisfaction with the services. In response to question #30, some 17% indicated they would have made another choice for their dentist. This desire to switch dentist is largely based upon their desire to reduce travel requirements. It is really doubtful that these individuals would change since only 3% of the total patient population saw more than one dentist under the Medicaid program.

Patients' overall satisfaction with the program was determined by asking how the program could be improved? Fifty-seven percent stated "no changes were necessary," and 15% wanted care extended to adults, i.e., over 21 years of age. Only 6% expressed negative ideas or dissatisfaction in a non-constructive suggestion. Other ideas offered included locating dentists in closer proximity, the provision of more comprehensive service, and a faster system of delivering services.

In summary, patient attitudes are definitely positive towards both the program and providers. They see the program as necessary, without which the great majority would not be able to obtain dental care. A small but significant number of those surveyed apparently had some difficulties in negotiating the procedures to obtain services. These barriers were overcome by a combination of the recipient's motivation and the caseworker's follow-up routine. The concensus of opinion was that they were well-treated personally and the quality of care was overwhelmingly graded high.

PATIENTS' HISTORY OF DENTAL CARE AND BEHAVIOR

Since this evaluation is principally concerned with the public health impact upon the patients, it is appropriate that the needs for services be fully understood. One level of analysis is explored in data collected about the dental history of those surveyed. Such items as previous dental care, dental hygiene habits, and other types of dental behavior are of little relative value epidemiologically. They are, however, good indicators in an indirect sense of the "dental IQ" of the target population. In the field of public health many programs have failed their objectives, though armed with epidemiological data, due to an inadequate understanding of a group's health attitudes and behavior which determines, to a great extent, the "treatability" of the group.

When asked whether the patient had been to see a dentist prior to receiving treatment under Medicaid, 55% responded in the negative. Of those whose response indicated previous treatment, the average time period between that visit and the Medicaid visit was around two years. Further, the patients were asked if they received yearly dental check-ups at school. Only 35% said "yes." Even though this is fully one-third of the group surveyed, the relationship between a school check-up and pursuing a necessary treatment plan is tentative.

The conclusion from the above is simply that the majority of those individuals would not receive dental care without this program, and even those who sought care would probably receive inadequate treatment due to economic constraints. This, of course, was the opinion of the overwhelming majority of dentists as has been discussed above.

The care and attention which patients showed in their responses to questions about dental cleaning habits was thorough. This data reflects indirectly upon both the level of oral hygiene and the potential for longevity of treatment results. These patients reported brushing their teeth an average of 10 times per week, but the modal and median responses were once a day. To supplement this, the patients' mothers were asked to rate how well the child brushed his (her) teeth. Twenty percent said "very good," thirty-one percent indicated a rating of "good," and 33% replied "about average." Two percent did not respond and 14% indicated the brushing was inadequate. If taken at face value, this does not indicate brushing habits very different from those of the general population.

Almost all patients reported having their own personal toothbrush and the average age of that brush was estimated at 6 months. The efficiency of a toothbrush is seriously impaired beyond 3 months of use, and 47% of this sample replied that their brush was not more than 3 months old while 15% said their toothbrush was one year old or older. It is not possible to validate these results and more than likely these responses to brushing habits are "optimistic" to some degree. Two points can be made with justification. First, the data is reasonably consistent and reflects logical effort. Secondly, the data indicates at least a knowledge of what constitutes minimally adequate toothbrushing habits. Whether these are actually practiced or not is open to question.

Another curious piece of data appeared when reviewing the responses to tooth paste brand preferences. Sixty-two percent of the respondents said they used a specific brand consistently. This indicates not only a preference but a reluctance to shop for bargain buys. The

brand rankings were: Crest 23%, Colgate 17%, Close-Up and Gleem both at 8%. Other brands had much smaller followings. However, these choices closely parallel the results generally of products market shares reports.

Lastly, an attempt was made, in question #7, to assess the usage of various dental care items by the patients surveyed. The percent of those who indicated using each item is given in Figure 3 below.

FIGURE 3

SELECTED DENTAL CARE ITEMS AND THE PERCENT OF PERSONS UTILIZING EACH

Item	Percent Using
1. Toothbrush	99.2
2. Mouthwash	58.3
3. Toothpick	42.9
4. Home Remedy for Pain	26.3
5. Dental Floss	14.2
6. Waterpick	1.7
7. Rubber tip	1.7
8. Chew stick	1.3
9. Other (unspecified)	1.3

The preceding findings related to dental home care practices give an overall impression that these Medicaid patients are fairly typical of the average American family. Few follow the recommended oral hygiene regimen and few appear to totally neglect dental cleaning habits. Again it should be pointed out that the importance of these findings lies principally in the knowledge displayed of what constitutes at least minimal

dental home care practices. The source of this information may very well be in some measure attributed to the dental care provided under the EPSDT program since, for the majority of patients, this was their first contact with a dentist.

During the course of these interviews a number of questions were directed at assessing the dental needs of those surveyed. While this is a direct method of obtaining respondent's perceptions, it cannot achieve any degree of objectivity. In order to cross-validate in some way these perceptions, respondents were also asked several questions about the nature of treatment services they received.

The survey group was asked if they had experienced any of a number of dental problems in the past 3 months. The percent indicating specific problems is found in Figure 4 below.

FIGURE 4

SPECIFIC DENTAL PROBLEMS WITH THE PERCENT OF PERSONS GIVING AN AFFIRMATIVE RESPONSE

Dental Problem	% Yes
1. sore or bleeding gums when brushing teeth	25.0
2. pain in tooth when drinking hot or cold liquid	23.3
3. crooked teeth	21.3
4. toothache (not due to injury)	17.9
5. tartar or stains on teeth	15.8
6. loose or loss of permanent tooth	11.7
7. other dental problems (unspecified)	7.1

This bears out the high prevalence of symptoms of dental disease one would expect to find in a group of welfare recipients. As such, it demonstrates clearly a need for treatment services. Coupled with the previous information showing the lack of professional dental care before its availability under Medicaid, the importance of this program to the dental health of these patients is undeniable.

Respondents were asked to rate the condition of the patient's teeth compared to other children his/her age. Only 10% stated "very good," 28% said "good," and 43% gave a rating of "above average." Obviously their reference group was that of friends and close acquaintances and not a comparison to society as a whole. Even with this reference point, 17% were rated as "not good" or "poor." It is also interesting that when the mother of the patient was asked to rate the condition of her own teeth, 47% gave a rating of "not good" or "poor." The striking difference is probably attributable to two factors, the mother's age in relation to the chronic development of dental disease and, as an adult, the judgment is most likely based upon a broader reference group than the child's.

In order to determine the basis of the mothers' rating of the condition of the childs' teeth, part D of question #14 was asked. The frequency of affirmative responses is found in Figure 5 below. These choices were not mutually exclusive.

FIGURE 5

BASES FOR MOTHERS, RATING THE CONDITION OF THE PATIENT'S TEETH

Item	% Affirmative
1. has white teeth	34
2. has very few or no cavities	58
3. has no missing teeth	26
4. good regular cleaning of teeth	34
5. uses other cleaning aids	5
6. no stains or tartar on teeth	13
7. told by doctor or dentist	24
8. told by family or friends	5

Items number 1, 2, 3, and 6 are appearance-oriented. The low frequency in item 6 relative to the preceding appearance items seems to indicate that the ordering of choices determined to some extent their selection. Care-oriented variables, items 4 and 5, account for almost 20% of the total affirmative responses. Only 15% of the total responses were based on any objective criteria as found in items 7 and 8. No conclusions can be drawn from these responses other than the fact that few respondents had any objective basis for their assessment of the child's dental status.

An attempt was made to find out the number of permanent teeth the patient (child) has had extracted. Thirty-six percent of the patients indicated having a permanent tooth extracted. This is reasonably consistent with the extraction rates discussed above. This group reported an average of just under 2 extractions per patient and this figure is in excess of

previous extraction rates developed on a per 100 patient basis. In all probability the latter figure represents a portion of the dental care received by patients prior to their Medicaid experiences and should not be compared to the service rates developed under this program.

Mothers of patients were also asked how many of their permanent teeth had been extracted. This was a point of curiousity and its informational value lies in the correlation between the dental health of a child and the dental health of its mother since they share much of the same heredity, environment, nutrition, and patterns of learned behavior. The importance of the mother's role and as a predictor of the child's future, dental health and dental health behavior is documented by Kriesberg and Treiman.[16,17] The current survey showed that 78% of the 240 mothers interviewed had at least one permanent tooth extracted. They averaged 7.4 extractions per person and 12% of the total had had 18 or more permanent teeth removed. While these figures are somewhat lower than Roe[18] found in her study of mothers in poverty groups, they certainly document the poor dental condition of this population.

The following discussion focuses on questions which elicited information on the nature and type of treatment services these patients received. This information has a two-fold purpose. First, the responses to these questions can be compared to service rates already developed and thereby provide a partial cross-validation on the accuracy of the responses to the questions. Secondly, because individual treatment records were not available, this is perhaps the best source of data on the surveyed group and provides indirectly some measure of their treatment needs.

In the Program Overview Section above it was determined that no no information was available to ascertain accurately the number of visits per patient. It was found that there were 1.39 invoices per patient statewide with 1.37 and 1.52 invoices averaged in the HPU and LPU areas respectively. Since each invoice represents minimally one visit to a dentist, it was important to attempt to find out more precisely how many visits patients were making. Overall the survey group averaged 2.77 reported visits per patient, as determined from the responses to question #3. The HPU respondents averaged 2.72 visits while the LPU average was slightly higher at 2.82 visits per patient. Importantly, the configuration of these figures conforms closely to the invoice data, the service rates, and the cost data previously indicated. They consistently indicate an average of slightly less than 2 visits per invoice.

Question #4 asked respondents to report the nature of the last visit under Medicaid. Six percent stated "emergency care" as the reason. "Initial care and screening" was given as the reason by 23% and 71% stated it was on the basis of "continuing the treatment plan." It would seem, therefore, that the secondary utilization rate is quite high and that the majority of these patients require many more treatment services than the initial pre-authorized voucher, with its $30.00 treatment maximum, allows.

Several responses required detailed recall on the part of the respondents. As such, these responses may be interpreted in one sense as a measure of the impact of the dental experiences under Medicaid. That is, the closer the responses conform to already known service rates the more sensitized the patients have become to information about

their dental status. Question #26 contained four items which relate to the thoroughness of the examination from the patient's viewpoint. The items, and the frequency of affirmation of each, are:

Did the dentist do any of the following?

	% Yes
1. ask questions about previous medical and dental history -	41%
2. discuss the type of dental problems found -	64%
3. explain what treatment would be necessary -	73%
4. give you a chance to ask questions about your child's teeth -	61%

The response rate to item one seems low. However, there could be a number of explanations for this although no speculation is offered here. The remaining items are probably more reflective of normal practices in dentists offices. In view of the fact that these patients did not pay for treatment and no economic decisions were required a, 73% response to item three seems quite good in that the dentists must have been trying to provide personalized attention.

Question #27 asked what dental education or instructions they received in the dentist's office. The six choices, and the frequency of responses, are listed below.

Item	% Yes
1. toothbrushing methods -	69%
2. brand of toothpaste -	24%
3. other cleaning habits -	30%
4. foods to avoid or nutritional counseling -	40%

Item	% Yes
5. the need for regular visits to the dentist -	40%
6. home care of the teeth -	51%

Almost without exception, all of these items have a seemingly low rate of response. In view of the proceeding question and its response rate there are two probable explanations. Either these educational efforts were unsuccessful for many of the patients and their recall was adversely effected and/or fatigue was setting in at this point during the interview. Whatever the reason, it is clear that more effort should be directed programmatically at prevention through educational means.

Patients were also asked to relate what treatment services they received. It can be anticipated that recall would be somewhat less a problem with treatment than with didactic measures. Table 14 below shows the rates for various treatment services calculated from two different data sources. The program rate is calculated by dividing the total number of services by the total number of recipients. The survey rate is simply the percentage of respondents who indicated receiving that service.

TABLE 14

RATES OF SELECTED TREATMENT SERVICES FROM PROGRAM DATA AND SURVEY DATA

Treatment	Per Patient Rate	
	Program Rate	Survey Rate
1. Examination	.91	.95
2. X-rays	1.01	.79
3. Cleaned teeth (prophylaxis)	.68	.83
4. Flouride application (topical)	.52	.53
5. Filled cavities (restoration)	1.37	.71
6. Extracted a tooth	.31	.32
7. Other	*	.08

*This rate would be meaningless for comparison purposes if calculated from program data; survey rate is included only for completeness.

Treatment services such as "examination," "prophylaxis," and "flouride application," where one ordinarily expects only one service per patient, are all remarkably comparable. "Extractions" show the same approximate rates which, in view of the youthful composition of the patient group, is also consistent. "X-rays" and "restorations" have significantly higher rates from the program data than those reported from survey data. In these areas, multiple services were probably provided to many patients and this would be reflected in higher program data rates. The conclusion must be that these respondents do

reasonably represent the overall patient population under the Medicaid Dental program. Further, their responses to the questionnaire, as judged by comparison to objective data, seem to have a high degree of validity. Internal consistency of responses to several questions shows good reliability and only a few questions, due largely to poor phrasing of those questions, were not utilized in this report.

As a final note on the potential impact of dental services under this program several comments are in order. The dental visit utilization rate of Medicaid recipients now approaches the utilization rate for the general population as reported by the National Center for Health Statistics[19,20] In view of the fact that dentists play an important diagnostic role in regard to medical as well as dental problems, any increase in utilization can be important to the individual dental patients' health. This idea was supported by the dentists surveyed for this evaluation when they indicated an average of 5% of their patients were referred to physicians for medically related problems.

Treatment needs of the group under study certainly exceed those services readily available. However, a comparison of the epidemiological findings of the National Center for Health Statistics[21] with the service rates developed under this program is quite favorable. That is to say that the rate of tooth preservation approaches the estimates of decayed (D) teeth per person for comparable population groups.

Lastly, one potential for long range impact can be seen in Roe's study of mother's in poverty groups cited earlier.[22] Her survey of employer's in the New York city area demonstrated that over 24% felt that a condition of missing or unsightly front teeth was either absolute or

relative grounds for not hiring an applicant. The implication of this finding for people already on public assistance and facing the highest unemployment rates in decades is unmistable.

The question of "no-shows" has been left until last for discussion. Previously it was seen that the dentist/providers estimated a Medicaid "no-show" rate of 28% on the average. Patients when asked if they had missed a scheduled appointment answered affirmatively in 25% of the responses. The majority indicated one missed appointment and only 4% said they missed more than one appointment. The reasons given for the broken appointments were are follows:

1. Transportation difficulties - 6%
2. Illness - 5%
3. Forgot the appointment - 5%
4. Traveling (out of town) - 3%
5. Other miscellaneous reasons - 5%

While the two questions, that for the providers and the question for the patients were not strictly synonymous the frequencies are comparably similar. Two important facts emerge, first, the patients surveyed did not attempt to minimize the problem and responded honestly. Second, the problem of "no-shows" is not a monolithic one and attempts to reduce the "no-show" rate may prove more costly and time consuming than results would justify.

Currently the social worker follows the practice of notifying the patient by phone or mail just prior to the scheduled appointment as a reminder. Some dentists also make a reminder call a part of their office routine. It is suggested that these practices be encouraged and that patients are carefully instructed to notify the dentist if for any reason they are unable to keep the appointment. On the other hand, some participating

dentists have developed scheduling to minize the disruptive effects of "no-shows". It does appear however, that the problem of "no-shows" will continue to be a source of irritation especially to providers with only a small fraction of Medicaid recipients in their practice.

REFERENCES

1. Friedman, Jay W., A Guide for the Evaluation of Dental Care. School of Public Health, University of California, Los Angeles, 1972.

2. U.S. Department of Health, Education, and Welfare. Dental Public Health Residency Report, An Analysis of the Title XIX Dental Care Program in Chemung County, New York, 1968.

3. O'Shea, Robert M., and G. Donald Bissell, "Dental Services Under Medicaid: The Experience of Erie County, New York". American Journal of Public Health, Vol. 59, no. 5, May, 1969, pp. 832-840.

4. Gluck, George M., "Dental Services Under Medicaid in Massachusetts". Journal of Public Health Dentistry, Vol. 31, no. 1, Winter Issue, 1971, pp. 14-26.

5. Jong, Anthony, and Dennis H. Leverett, "The Operation of a Community Dental Clinic in a Health Center; an Evaluation". Journal of Public Health Dentistry, Vol. 31, no. 1, Winter Issue, 1971, pp. 27-31.

6. Shory, Naseeb L., "Operation and Costs in Alabama's Public Dental Clinics 1965". Journal of Public Health Dentistry, Vol. 28, no. 4, Fall Issue, 1968, pp. 220-233.

7. Jonas, Steven, "Appointment-Breaking in a General Medical Clinic". Medical Care, Vol. IX, no. 1, January-February 1971 pp. 82-88.

8. Jong, Anthony, and Dennis H. Leverett, "The Operation of a Community Dental Clinic in a Health Center; and Evaluation". Journal of Public Health Dentistry, Vol. 31, no. 1, Winter Issue, 1971, pp. 27-31.

9. Baum, Bruce J., "Medicaid and the Practicing Dentist". Journal of the Massachusetts Dental Society, Winter, 1969, pp. 30-31.

10. DiStasio, Joseph G., "The Occurrence of 'No Show' Appointments Among Medicaid and Private Dental Patients". Journal of the Massachusetts Dental Society, Spring, 1969, pp. 82-84.

11. U.S. Department of Health, Education, and Welfare. Dental Public Health Residency Report, An Analysis of the Title XIX Dental Care Program in Chemung County, New York, 1968.

12. U.S. Department of Health, Education, and Welfare, Dental Public Health Residency Report, An Analysis of the Title XIX Dental Care Program in Chemung County, New York, 1968.

13. O'Shea, Robert M., and G. Donald Bissell, "Dental Services Under Medicaid: The Experience of Erie County, New York". American Journal of Public Health, Vol. 59, no. 5, May, 1969, pp. 832-840

14. Gluck, George M., "Dental Services Under Medicaid in Massachusetts". Journal of Public Health Dentistry, Vol. 31, no. 1, Winter Issue, 1971, pp. 14-26.

15. Shory, Naseeb L., "Operation and Costs in Alabama's Public Dental Clinics 1965". Journal of Public Health Dentistry, Vol. 28, no. 4, Fall Issue, 1968, pp. 220-233.

16. Kriesburg, L., and B.R. Treiman, "Socioeconomic Status and the Utilization of Dentists Services". Journal American College of Dentist, Vol. 27, 1960, pp. 147-165.

17. Kriesburg, L., and B.R. Treiman, "Preventive Utilization of Dentists' Services Among Teenagers". Journal American College of Dentist, Vol. 29, 1962, pp. 28-45.

18. Roe, Daphne, A., et.al, "Health and Nutritional Status of Working and Non-working Mothers in Poverty Groups". New York: Cornell University, January, 1974, pp. 112-158.

19. U.S. Department of Health, Education, and Welfare. Vital and Health Statistics, Current Estimates from the Health Interview Survey United States-1972, Ser. 10, no. 85, c.1.

20. U.S. Department of Health, Education, and Welfare. Vital and Health Statistics, Dental Visits Volume and Interval Since Last Visit United States-1969, Ser. 10, no. 76, c.1.

21. U.S. Department of Health, Education, and Welfare. Vital and Health Statistics, Decayed, Missing, and Filled Teeth Among Children Untied States, Ser. 11, no. 106, c.1.

22. Roe, Daphne, A., et.al., "Health and Nutritional Status of Working and Non-working Mothers in Poverty Groups". New York: Cornell University, January, 1974, pp. 112-158.

TEXAS STATE DEPARTMENT OF HEALTH

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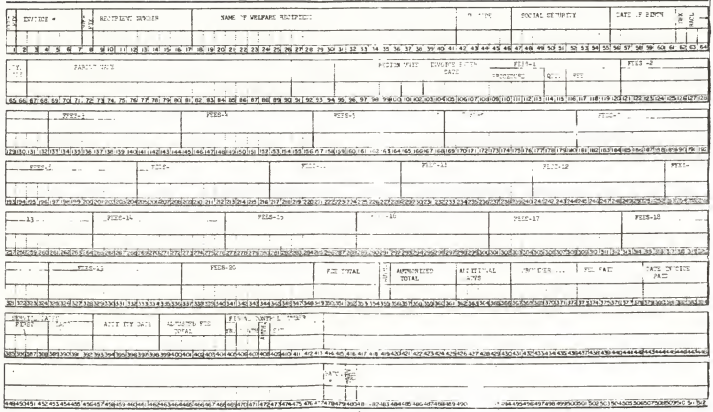

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September 3, 1974

Dear Doctor:

The staff of the Title XIX Dental Program feels that we have accomplished many things since the program began in February, 1973. It is a considered opinion of many professionals that Texas has one of the finest programs in the country. Without the professional goodwill and self-discipline of our cooperating providers, this would not be possible. However, as I am sure you will agree, mistakes have been made and many problems remain to be solved. So, we are calling upon you once again for assistance.

We have come to a point in the Texas program that enough experience has been gained to allow for a program evaluation. The University of Texas School of Public Health in cooperation with the Texas State Department of Health and the State Department of Public Welfare will conduct the evaluation. Through utilizing an outside evaluation, we are insuring an objective and scientific professional evaluation.

As practitioners you deal with Medicaid clients on a one-to-one basis. This has both advantages and disadvantages. The evaluation will recognize that as providers, you are the greatest resource of the program not only in terms of impact upon clients, but also for the collective experience gained in your offices and clinics. The attached questionnaire has been reviewed by our staff, and we feel it offers a fair and unbiased opportunity for our providers to express their opinions while reporting their experience within our program.

We are asking that you take the few minutes necessary to complete this questionnaire so that the program and services can be improved. A return envelope has been provided with the questionnaire. To further insure your cooperation and freedom in responding to questions, it has been agreed that all respondents' identities will remain confidential. Please do not send these completed forms to our office. On the following instruction sheet is the address and telephone number of Mr. James M. Weber, who you may contact if you have any inquiries concerning the forms. Mr. Weber is the only person who will know which providers have been surveyed.

I would like to take this opportunity to personally extend my gratitude for your efforts and participation in the Medicaid program and to thank you in advance for your cooperation in making this a fine evaluation.

Sincerely,

W C Sellingsloh DDS

W. C. Sellingsloh, D.D.S., Director
Title XIX EPSDT Dental Program

EPSDT DENTAL PROGRAM PROVIDER SURVEY

The Medicaid Dental Program is currently being evaluated by the University of Texas School of Public Health in cooperation with the Texas State Department of Health and the Texas State Department of Public Welfare. An essential part of the evaluation is to understand the opinions and attitudes of participating dentists.

As providers of service in the Title XIX dental program, you are the most essential group reaching the client population and your collective experience needs to be tapped in an organized way to not only evaluate the program/but to provide guidelines for improvements.

Nationally the Medicaid Dental Program is relatively new and no thorough attempt to evaluate its results has been made. Until such an evaluation is accomplished, the program faults and deficiencies which individual practitioners complain about will get little corrective action. As one base for improvement, we need the judgments that only those who offer services under the program can provide. We need your comments and reactions if this evaluation is to be used to correct program faults and deficiencies.

This questionnaire will only take a few minutes of your time, and with a sufficiently large response based on each practitioner's experience, it will constitute an important pool of information. Your responses will be held in complete confidence. The only individual who will be able to identify a completed questionnaire with a practitioner is the research analyst of the University of Texas School of Public Health. Once the completed questionnaires are received, the results will be coded, summarized and analyzed in such a manner to assure anonymity of respondents. By insuring that no one connected with the State's program knows respondents' identities, it is felt that your complete candor and cooperation can be achieved.

It is very important that the practitioner personally complete the questionnaire and as promptly as possible. Please return completed forms in the return envelopes provided.

Thank you for your cooperation in this important undertaking.

James M. Weber, BS, MS
Evaluation Analyst

**For questions or inquiries regarding this questionnaire you may contact me at The University of Texas School of Public Health by calling either (713) 792-4405 or 792-4451, or at the address on the enclosed self-addressed envelope.

1. PROVIDER: age _____ sex _____ race _____

type of practice or speciality _____

County of practice _____

County of residence _____

2. How long have you been participating in the Title XIX Program? _____(months)

3. Could you briefly state your reasons for participating?

1. _____

2. _____

3. _____

4. Have you ever refused to treat a Title XIX patient? Yes____ No ____
If yes, please indicate your reason for refusal: (check appropriate answer)

_____ eligibility not established _____ repeated broken appointments

_____ interference with other patients _____ social incompatibility

_____ patient repeated uncooperative _____ other, specify _____

5. Please estimate what percent of your practice is composed of Title XIX patients?
_____%

6. Regarding your participation, would you like to: (check appropriate answer)

_____ increase Title XIX patient load _____ decrease Title XIX patient load

_____ maintain present Title XIX patient load

7. Do you feel free to and/or actually exercise some selection in which Title XIX patients you screen and treat? Yes____ No ____
If yes, on what basis is selection made? _____

_____

If no, why not? _____

8. Do you feel that you have lost private practice patients since participating in Title XIX? Yes _____ No _____
If yes, why? _____

9. As a comparison of Title XIX patients and your private patients, please estimate the percent who would require the following services at the initial visit.

	Title XIX Patients		Private Patients	
	(pre-school)	(to age 21)	(pre-school)	(to age 21)
A. Examination: mirror, explorer and digital exam, history and charting	_____%	_____%	_____%	_____%

	Title XIX Patients		Private Patients	
	(pre-school)	(to age 21)	(pre-school)	(to age 21)
B. Radiographs				
Intraorals				
Bite-wints only	_____%	_____%	_____%	_____%
Full-mouth series	_____%	_____%	_____%	_____%
Singular or multiple	_____%	_____%	_____%	_____%
Panorex	_____%	_____%	_____%	_____%
Other	_____%	_____%	_____%	_____%

	Title XIX Patients (pre-school)	Title XIX Patients (to age 21)	Private Patients (pre-school)	Private Patients (to age 21)
C. Prophylaxis	_____%	_____%	_____%	_____%
D. Study models	_____%	_____%	_____%	_____%
E. Pulp testing	_____%	_____%	_____%	_____%
F. Other lab tests	_____%	_____%	_____%	_____%
G. Oral hygiene instructions	_____%	_____%	_____%	_____%

10. As compared with your private patient population, what percent of Title XIX patients need the following types of services.

	Title XIX Patients (pre-school)	Title XIX Patients (to age 21)	Private Patients (pre-school)	Private Patients (to age 21)
A. Percent preventative care	_____%	_____%	_____%	_____%
B. Percent surgical care	_____%	_____%	_____%	_____%
C. Percent tooth restoration	_____%	_____%	_____%	_____%
D. Percent missing or non-replacable tooth replacement	_____%	_____%	_____%	_____%
E. Percent periodontic services	_____%	_____%	_____%	_____%
F. Percent orthodontic services	_____%	_____%	_____%	_____%

11. Can you estimate the percent of Title XIX patients who needed services not covered by Medicaid and who consequently did not receive the necessary treatment from you? _____%

12. What is the total percentage of Title XIX patients you refer to other dentist for services, i.e. pedodontics, periodontics, prothodontics, oral surgery, orthodontics. _____%

    A. What percentage of Title XIX patients do you refer to physicians for medically-related problems? _____%

13. In what percent of Title XIX cases do you perform services for which you know you are not going to receive compensation? _____%

14. What percent of your Title XIX patients do you complete a treatment plan? _____%

15. With current Title XIX guidelines, what do you see as the greatest needs for services not yet authorized?
    1. _____
    2. _____
    3. _____

16. If the Title XIX program were not in effect, what percent of your Medicaid patients would go without dental services? _____%

17. What would you say are the major reasons motivating Title XIX patients to see a dentist?
    1. _____
    2. _____
    3. _____

18. If Title XIX funds were to be significantly increased and/or reallocated, in what ways should the program focus be changed?
    1. _____

18. continued

2. _____

3. _____

19. Can you describe the most troublesome operating problems you encounter in participating in Title XIX?

1. _____

_____

_____

2. _____

_____

_____

3. _____

_____

_____

20. Has the dental health status of your Title XIX patients as a group improved?
Yes _____ No _____
If yes, do you feel that the improvement is:
_____ very temporary _____ of long term duration
_____ temporary with a possibility of long term effects

21. What percent of Title XIX appointments become "no shows?" _____%

22. What is your office policy regarding broken appointments? _____

_____

23. Please estimate what percent of your gross income from your practice is Title XIX remuneration? _____%

24. Do you have any constructive criticism of the Title XIX program? For example, please indicate how you would solve a particular provider problem? _____

_____

_____

_____

_____

_____

25. Please state what you feel are the most positive aspects of the Title XIX program?

_____

_____

_____

_____

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INTERVIEWERS GUIDE

TO THE ADMINISTRATION OF

THE EPSDT DENTAL PROGRAM SURVEY

INTERVIEWERS GUIDE

Part I Instructions to the Interviewers

1. Please be polite and courteous to the interviewee at all times.
2. Introduce yourself to the interviewee by stating your name and the agency you work for.
3. Indicate to the interviewee that you are taking a survey of persons who have received dental services under the State's Medicaid program and that she (he) has been chosen to participate in the survey.
4. Ask for their cooperation and participation in the survey.
5. Explain purpose of consent form and read the consent form to both the parent or guardian and the recipient.
6. Before proceeding to ask any question, be sure to obtain necessary signatures.
7. Read questions slowly and clearly.
8. Occasionally, it might be necessary to re-phrase questions in your own words or translate where required. When this is necessary, please insure that the major point of the question is maintained.
9. Please feel free to make such notes and/or comments which you feel will aid us in the evaluation of the questionnaire.
10. Briefly comment, on the questionnaire, on patient cooperation and receptiveness and the "atmosphere" during the interview.
11. Please list any and all reasons why the interview was not completed.
12. Remember that some questions might be perceived by the interviewee as embarassing. Try not to express any disapproval of the manner in which the interviewee answers questions or patterns of life style.

Part II Statement to Patient

Please read the following statement aloud to the parent or guardian and the child or recipient as well.

The State is interested in determining how well the dental program under Medicaid is serving the needs of the people. To do this, we are asking a large group of persons who have received dental services to indicate their impressions of the program and suggest ways in which the program may be improved. The interview will take about 20 minutes of your time. Before I ask you any questions, let me explain that your answers will be kept strictly confidential. No member of the Health Department or the Dental program, or any dentist will know of your participation in this survey.

We are asking that you give us your true opinions and promise in return that anything you say will not effect any benefits you now receive or your eligibility for any benefits in the future. We hope we can improve our dental services and you can help us do that.

You may refuse to answer any questions now or at any time during the interview, and I will stop. You do not have to answer these questions and if you do or don't, it will make no difference to your eligibility for welfare or any of the State programs or benefits. We are asking you to answer these questions only to help us make the dental services better.

Do you have any questions?

CONSENT FORM FOR THE EPSDT

DENTAL PROGRAM SURVEY QUESTIONNAIRE

DATE: _____

SIGNATURE OF INTERVIEWER: _____
(To be signed in front of interviewee)

STATEMENT OF CONSENT: I have heard and/or read the above statement and agree to answer only those questions I choose to answer and do so of my own free choice.

_____
Signature of Parent/Guardian

_____
Signature of Recipient

PART IV

Medicaid EPSDT Dental Program Questionnaire

SECTION I - DEMOGRAPHIC INFORMATION

RECIPIENT: _____ (age) _____ (race) _____ (sex) _____ (religion)

_____ (occupation) _____ (educational level)

MOTHER: (or Legal Guardian) _____ (age) _____ (occupation) _____ (educational level)

_____ (# of children in home) _____ (approximate yearly income including welfare payments)

FATHER: YES ___ NO ___ (lives in home) _____ (age) _____ (race)

_____ (occupation) _____ (educational level)

Recipient Attitudes (or Mother if 13 Years or Younger)

1. Prior to receiving dental treatment under Medicaid, has this child ever been to a dentist? Yes_____ No _____

   If yes, at what age? _____

2. When did your child last visit a dentist? _____

   Was this covered by Medicaid? Yes _____ No _____

3. In total, how many dental visits has your child received under Medicaid? _____

4. Was the last visit under Title XIX on the basis of:

   (Check one only)

   ____ emergency care

   ____ initial screening and diagnosis

   ____ part of continuing treatment plan

   ____ other (specify) _____

5. How often does your child brush his teeth on a weekly basis? _____

6. Do you use only one brand of tooth paste? Yes _____ No _____

   If yes, which brand? _____

7. Which of the following items are used by your child:

(Check appropriate response)

___ dental floss

___ waterpick

___ toothpick

___ rubber tip

___ other, specify _____

Does any other member of the family use any of the above dental aids?

Yes ___ No ___

If yes, which ones? _____

8. Does each child in the family have his or her own toothbrush? Yes ___ No ___

9. How old is your child's toothbrush? _____

10. Has your child experienced any of the following problems in the past 3 months?

____ toothache

____ sore or bleeding gums

____ loose a permanent tooth

____ tartar or stains on teeth

____ crooked teeth

____ pain in tooth when drinking hot or cold liquid

____ other, specify _____

11. Has your child received regular (yearly) dental checkups at school?

Yes _____ No _____

12. How well does your child brush and clean his teeth?

____ very good

____ good

____ about average

____ not so good

____ badly

13. Which word best describes the condition of your child's teeth?

____ very good

____ good

____ about average

____ not so good

____ poor

14. A. Which word best describes the condition of your (mother) teeth?

____ very good

____ good

____ about average

____ not so good

____ poor

B. How many teeth have you (mother) had extracted? _____

C. How many teeth has your child had extracted? _____

15. If you were not eligible for dental services under Medicaid, would you have been able to obtain dental services for your child? Yes___ No___

If yes, where?

____ private dentist

____ city or county clinic

____ other (specify) _____

16. When was the last time you (mother) visited a dentist? _____

17. Why did you decide to take your child to see a dentist? _____

_____

18. Which of the following motivated you to take your child to see the dentist?

(Check appropriate answer)

____ a friend or neighbor

____ a family member

____ your social worker

____ a dentist

____ a physician

____ other (specify) _____

19. Have you ever had any difficulty in obtaining dental services for any of your children under Medicaid?

Yes ____ No _____

If yes, when and explain source of difficulty _____

_____

_____

20. Has your child ever missed a scheduled dental appointment? Yes___ No ___.

If yes, how many times? _____

For what reason(s) was the appointment(s) missed:

____ needed a babysitter

____ transportation problem

____ sickness

____ conflict with job

____ forgot about appointment

____ other, specify _____

21. Have you ever been refused treatment under Title XIX? Yes _____ No _____

If yes, why? _____

_____

22. How did you learn of the dental program under Medicaid?

____ social worker

____ health program

____ friend

____ mailed notice

____ other, specify _____

23. When did you find out you were eligible for dental services? _____

24. During your child's dental visit, do you feel that he/she was treated in the same way as other patients? Yes ____ No ____

If no, why? _____

_____

25. How would you describe the attitude of the dentist?

(Check appropriate answer)

____ friendly

____ concerned

____ courteous

____ professional

____ cool

____ impersonal

____ did not want to be bothered

____ hostile

26. During dental visits with your child, did the dentist do any of the following:

(Check appropriate answer)

____ ask questions about previous medical and dental history

____ discuss the type of dental problems found

____ explain what treatment would be necessary

____ give you a chance to ask questions about your child's teeth

27. During visits to the dentist did anyone in the dentist's office give you or your child instructions about the following:

(Check appropriate answer)

____ toothbrushing

____ toothpaste

____ other cleaning habits

____ foods to avoid

____ the need for regular visits to the dentist

28. To your knowledge, which of the following dental services have been performed on your child?

(Check appropriate answer)

____ examined teeth

____ X-rays

____ cleaned teeth

____ painted a bitter fluoride on teeth

____ filled cavities

____ extracted a tooth

____ other (specify) _____

29. How would you rate your level of satisfaction with the services your family has received under Medicaid?

(check only one)

____ very good

____ good

____ fair

____ needs to be improved

____ not worth your trouble to get services

30. If you had a choice of going to any dentist under this program, would you have chosen another dentist? Yes____ No ____

Why? _____

31. Do you have any ideas of how the dental Medicaid program may be improved to provide better or easier services for you and your family?

_____

_____

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